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FULL-TIME LOCAL HEALTH SERVICES

December 31, 1956

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service

ORGANIZATION *and* STAFFING *for* FULL-TIME LOCAL HEALTH SERVICES

**Analysis of information
submitted to the
Public Health Service
in
REPORT OF PUBLIC HEALTH PERSONNEL
as of December 31, 1956**

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**U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service Bureau of State Services
Division of General Health Services**

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INTRODUCTION

Annually, since 1946, reports have been received from health organizations serving local areas on a full-time basis which reflect coverage of the unit and the full-time staff employed by the official health agency.^{1/} Employees of official agencies other than the health agency engaged in public health services in the jurisdiction are also reported.

A total of 1,425 health units submitted the "Report of Public Health Personnel" (PHS Form 803) as of December 31, 1956. These units were operating on a full-time basis according to the current definitions of a full-time local health unit and full-time health officer. These definitions are as follows:

A full-time local health unit is defined as one which is officially organized to provide medical, nursing, and sanitation public health services during all of the regularly scheduled work week of the governmental unit to which it is attached and which is under the direction of a full-time health officer or other designated full-time administrative head.

A full-time health officer is defined as one who is officially designated to direct the activities of a health department and who is paid to so function during all of the regularly scheduled work week of the governmental unit to which the department is attached.

Strict adherence to the above definition for a full-time health unit presents problems, in particular, adherence to that part which relates to the direction of the unit by a full-time health officer or other full-time administrative head. In some units, medical, nursing, and sanitation public health services are provided on a full-time basis, but the health officer does not serve one unit exclusively although he is responsible for the health department's operation on a full-time basis. Similarly, in some other units the health officer assumes full responsibility for the department's functions but is not required to devote his entire time to health department activities.

The fact that a health department has been included as a full-time unit in no way reflects the quality or adequacy of health services provided under its health program. Rather, it is indicative that an official organization has been established with arrangements for basic public health services to be made available on a continuing basis under the guidance of an officially appointed health officer or other designated administrative head.

^{1/} Analysis of data reported for 1946, 1947, 1949, 1950, 1951, 1952, 1953, 1954, and 1955, available in published form. Data reported for 1948 unpublished.

In addition to the information reported in the "Report of Public Health Personnel," selected source data which reflect some of the characteristics of the jurisdictions reporting are incorporated in this analysis. Such data include information on the expenditures of the health units, as reported to the Public Health Service by State health departments for the fiscal year of 1956, and the per capita income of reporting health jurisdictions. The latter is based on the net effective buying income of counties and cities as published by Sales Management, "Survey of Buying Power," May 1956.

The terms "organization," "unit," "jurisdiction," and "department" are used synonymously throughout the analysis which is presented in four sections. These sections are as follows:

- (1) Extent of Coverage by Full-Time Local Health Organizations,
- (2) Selected Characteristics of Areas Organized for Full-Time Local Health Services,
- (3) Financial Capacity of Organized Areas and Expenditures in such Areas for Public Health,
- (4) Personnel Engaged in Local Public Health Programs.

EXTENT OF COVERAGE BY FULL-TIME LOCAL HEALTH ORGANIZATIONS

The most complete information available to the Public Health Service, as of July 1957, reveals a total of 1,435 health units organized to provide local health services on a full-time basis.^{1/} These units serve 2,274 counties, include 257 city health departments, and cover areas with a combined population of about 156 million people. The extent of coverage closely parallels that reported for 1956. Although the number of units decreased by 11, the number of counties served increased by 65, and the estimated population residing in areas with full-time service increased 3.7 percent. The progress made in the establishment of local health organizations during the past several years is shown in the Appendix.

Reports of Public Health Personnel (PHS Form 803) submitted as of December 31, 1956, were received from 1,425 units. Units not receiving Federal or State aid are not required to report, although encouraged to do so on a voluntary basis. The reporting units included 2,208 counties and 265 cities, having an estimated population^{2/} of nearly 150 million. Thus, areas not included in reporting jurisdictions comprised 859 counties, or approximately 28 percent of the 3,067 counties in the country, in which about 19 million people reside. Although some type of community organization for providing public health services may be operative in a number of these areas, it is presumed that either the organization does not meet the requirements specified with respect to provision of services and direction of operation or the unit does not receive Federal or State aid and, therefore, is not required to report.

Areas Reporting Full-Time Local Health Service

The Public Health Service classifies health units organized to provide local health services into four types. These are as follows:

1. Single county units - serve a single county and may or may not serve the city or cities therein, depending upon the existence of separate city health units.

^{1/} Directory of Full-Time Local Health Units, 1957 Revision. PHS Publication No. 118.

^{2/} Estimated as of January 1, 1957. 1950 Census data extrapolated to January 1, 1957, with adjustments made on the basis of State totals as estimated by the Bureau of the Census as of July 1, 1956.

2. City health departments - serve a single city. In three instances such departments serve a total of seven entire counties because of continuous boundaries. These cities are New York (serving five counties), Philadelphia, and New Orleans.
3. Local health districts - serve two or more counties or other types of local governmental units. In such districts contiguous counties or municipalities have combined their resources and formally organized a single operating health unit with control vested in local authority and directed by one health officer or administrative head.
4. State health districts - organized either for providing direct local services or for providing advisory and supervisory services to various types of local governmental units. In such districts, control is vested in the State.

There is only slight variance from year to year in the distribution of units according to type of organization. More than half are usually in the single county classification. In 1956, 55.2 percent were in this classification. (See table 1.) These units serve about 35 percent of the total estimated United States population. The number of city health departments has increased more than other types largely because of wider participation in completion of the Report of Public Health Personnel. For 1956, 265 cities submitted the report. They accounted for 18.6 percent of the units and included approximately 29 percent of the estimated population of the country. Within the past few years, several city health departments have combined with their respective county health departments.

There were 272 units of the local health district type included among reporting jurisdictions. The counties included in local districts numbered 703, but the population covered by this type of organization was relatively small, with slightly less than 10 percent of the total estimated population of the country residing in these areas

Although relatively few in number, State health districts--numbering 101--accounted for almost one-third of the county coverage. The population included in these districts amounted to 25.5 million.

Table 2 shows the coverage of each State according to population of the organized areas, the number of organizations, and the counties included. Local health services were reported to be available on a full-time basis, through either State or locally organized units, to the entire population of 19 States and the District of Columbia. In 22 States, every county was included among the organized areas, but some city areas within counties in 2 of these States were not covered.

Table 1.--Extent of Coverage of the Country by Health Organizations
of Designated Types Reporting Full-Time Local Health Service
December 31, 1956

Type of health organization	Full-time health organizations		Countries		Population ^{1/}	
	Number	Percent	Number	Percent	Number	Percent
Total number of counties and population in U. S.	-	-	3,067	100.0	168,650,000	100.0
Total number of health organizations reporting, counties and population included:	1,425	100.0	2,208	72.0	149,556,800	88.7
Single county	787	55.2	(787)	(25.7)	(59,371,700)	(35.2)
City health department	265	18.6	(7) ^{2/}	(0.2)	(48,507,100)	(28.8)
Local health district	272	19.1	(703)	(22.9)	(16,124,000)	(9.6)
State health district (actual service and supervisory)	101	7.1	(711)	(23.2)	(25,554,000)	(15.1)
Total number of counties and population in unreported areas	-	-	859	28.0	19,093,200	11.3

^{1/} Estimated as of January 1, 1957. 1950 Census data extrapolated to January 1, 1957, with adjustments made on the basis of State totals as estimated by the Bureau of the Census as of July 1, 1956.

^{2/} These seven counties are served by city health departments, the county and city being conterminous. The cities involved are: New Orleans, New York (5 counties), and Philadelphia.

Table 2.--Population of Reporting Areas in Each State Having Full-Time Local Health Service,
Number of Health Organizations Represented, and Number of Counties Included
December 31, 1956

State	Total population ^{1/}	Areas reporting				Total counties in each State
		Population ^{1/}	Percent of total population	Number of health organizations	Number of counties ^{2/} included ^{2/}	
Totals	168,650,000	149,556,800	88.7%	1,425	2,208	3,067
Alabama	3,186,000	3,186,000	100.0	67	67	67
Arizona	1,095,500	806,600	73.6	5	4	14
Arkansas	1,828,000	1,674,600	91.6	27	65	75
California	13,633,500	13,397,500	98.3	53	50	58
Colorado	1,643,500	1,248,600	76.0	10	20	63
Connecticut	2,227,500	1,151,800	51.7	15	-	8
Delaware	409,500	409,500	100.0	4	3	3
Dist. of Columbia	872,500	872,500	100.0	1	-	-
Florida	3,929,000	3,558,300	90.6	37	66	67
Georgia	3,757,500	3,757,500	100.0	49	159	159
Idaho	633,000	397,100	62.7	5	21	44
Illinois	9,467,500	9,467,500	100.0	36	102	102
Indiana	4,454,500	4,454,500	100.0	16	92	92
Iowa	2,692,000	2,692,000	100.0	10	99	99
Kansas	2,124,500	1,155,700	54.4	17	18	105
Kentucky	3,023,000	3,023,000	100.0	120	120	120
Louisiana	3,042,500	2,999,200	98.6	61	61	64
Maine	912,500	912,500	100.0	10	16	16
Maryland	2,883,500	2,883,500	100.0	24	23	23
Massachusetts	4,710,000	4,710,000	100.0	58	14	14
Michigan	7,656,000	6,811,700	89.0	46	70	83
Minnesota	3,274,500	3,274,500	100.0	15	87	87
Mississippi	2,130,500	2,130,500	100.0	61	82	82
Missouri	4,318,500	4,190,600	97.0	41	114	114
Montana	640,500	127,500	19.9	4	6	56
Nebraska	1,430,500	542,900	38.0	4	4	93
Nevada	258,000	162,600	63.0	2	2	17
New Hampshire	561,500	86,200	15.4	1	-	10
New Jersey	5,394,500	5,394,500	100.0	82	21	21
New Mexico	825,000	825,000	100.0	10	32	32
New York	16,230,500	16,230,500	100.0	41	62	62
North Carolina	4,492,000	4,492,000	100.0	69	100	100
North Dakota	664,500	363,600	54.7	7	30	53
Ohio	9,161,000	9,161,000	100.0	71	88	88
Oklahoma	2,271,500	1,867,200	82.2	22	48	77
Oregon	1,742,500	1,469,100	84.3	16	17	36
Pennsylvania	10,866,500	5,045,400	46.4	26	6	67
Rhode Island	819,500	819,500	100.0	8	5	5
South Carolina	2,388,000	2,335,800	97.8	50	46	46
South Dakota	705,500	43,800	6.2	1	1	67
Tennessee	3,490,500	3,382,700	96.9	59	88	95
Texas	9,106,000	6,176,000	67.8	47	57	254
Utah	827,500	43,400	5.2	1	1	29
Vermont	366,000	*	*	*	*	14
Virginia	3,687,000	3,662,700	99.3	46	98	98
Washington	2,715,500	2,411,900	88.8	19	23	39
West Virginia	1,973,500	1,890,200	95.8	31	48	55
Wisconsin	3,799,000	3,799,000	100.0	19	71	71
Wyoming	328,500	59,100	18.0	1	1	23

^{1/} Estimated as of January 1, 1957. 1950 Census data extrapolated to January 1, 1957, with adjustments made on the basis of State totals as estimated by the Bureau of the Census as of July 1, 1956.

^{2/} Includes 7 counties which are served by city health departments, the county and city being coterminous. The cities involved are: New Orleans, New York (5 counties), and Philadelphia.

* Vermont has no full-time health organizations rendering local health service.

A grouping of the States according to the percent of each State's population served by full-time health organizations reveals that the 19 States and the District of Columbia in the 100-percent group, mentioned previously, comprised 48 percent of the total population of the country, or nearly 80 million people. (See table 3.) In 15 other States, between 75 and 99 percent of the population resided in areas covered by some type of health organization. The population of these States totaled 56 million, or slightly more than one-third of the national total. In 7 States, which included almost 10 percent of the population of the country, full-time local health services were available to between 50 and 74 percent of the total residents. In 7 other States, less than 50 percent of the population resided in areas organized for full-time service. The population of these areas comprised about 9 percent of the national total. Vermont is the only State in which none of the population is covered by full-time local health organizations.

Local governmental organization influences the pattern of organization for administering local health services. Therefore, there is wide variation among the States in the types of organizations prevailing. As can be seen from figure 1, which shows for each State the proportion of the population served by different types of units, 20 States had 3 or more types of organizations. Eleven States had only one type of health organization.

Geographic differences in types of health organization and extent of coverage of the Nation are portrayed in figure 2. Independent city health units are predominantly located in the northeastern part of the country, while single county units and local health districts prevail in the Southeastern and South Central States. The States which have organized State health districts to provide services to local areas, or to supplement part-time services, are predominant in the North Central and Northeastern States. It will be noted that the extent of coverage in the southeastern and south central areas is much greater than in other areas. Absence of any type of local health organization is readily apparent throughout a large portion of the Rocky Mountain States, the Great Plains area, the Southwest, and in some sections of New England.

Table 3.--Percent of Each State's Total Population Covered by Full-Time Health Organizations, Arranged by Percentage Groups, Showing Number of States and Total Population of the States within Each Group
December 31, 1956

Percentage group	Number of States	Population ^{1/}	
		Number	Percent
Totals	<u>49</u>	<u>168,650,000</u>	<u>100.0</u>
None	1	366,000	0.2
1 - 24	5	3,063,500	1.8
25 - 49	2	12,297,000	7.3
50 - 74	7	16,109,000	9.6
75 - 99	15	56,450,000	33.5
100	19	80,364,500	47.6

^{1/} Estimated as of January 1, 1957. 1950 Census data extrapolated to January 1, 1957, with adjustments made on the basis of State totals as estimated by the Bureau of the Census as of July 1, 1956.

Figure I. PERCENT OF EACH STATE'S TOTAL POPULATION COVERED BY
VARIOUS TYPES OF LOCAL ORGANIZATION (December 31, 1956)

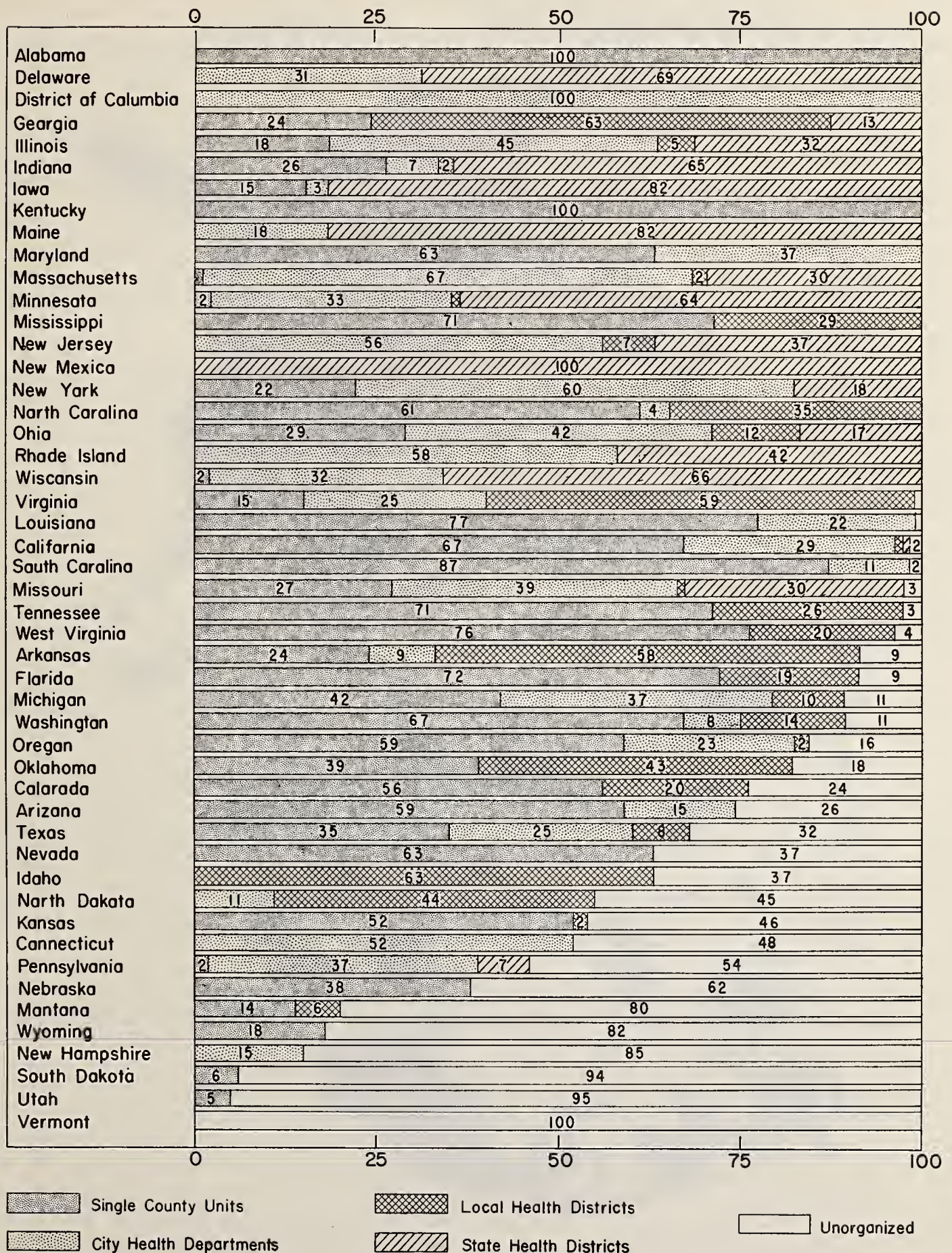
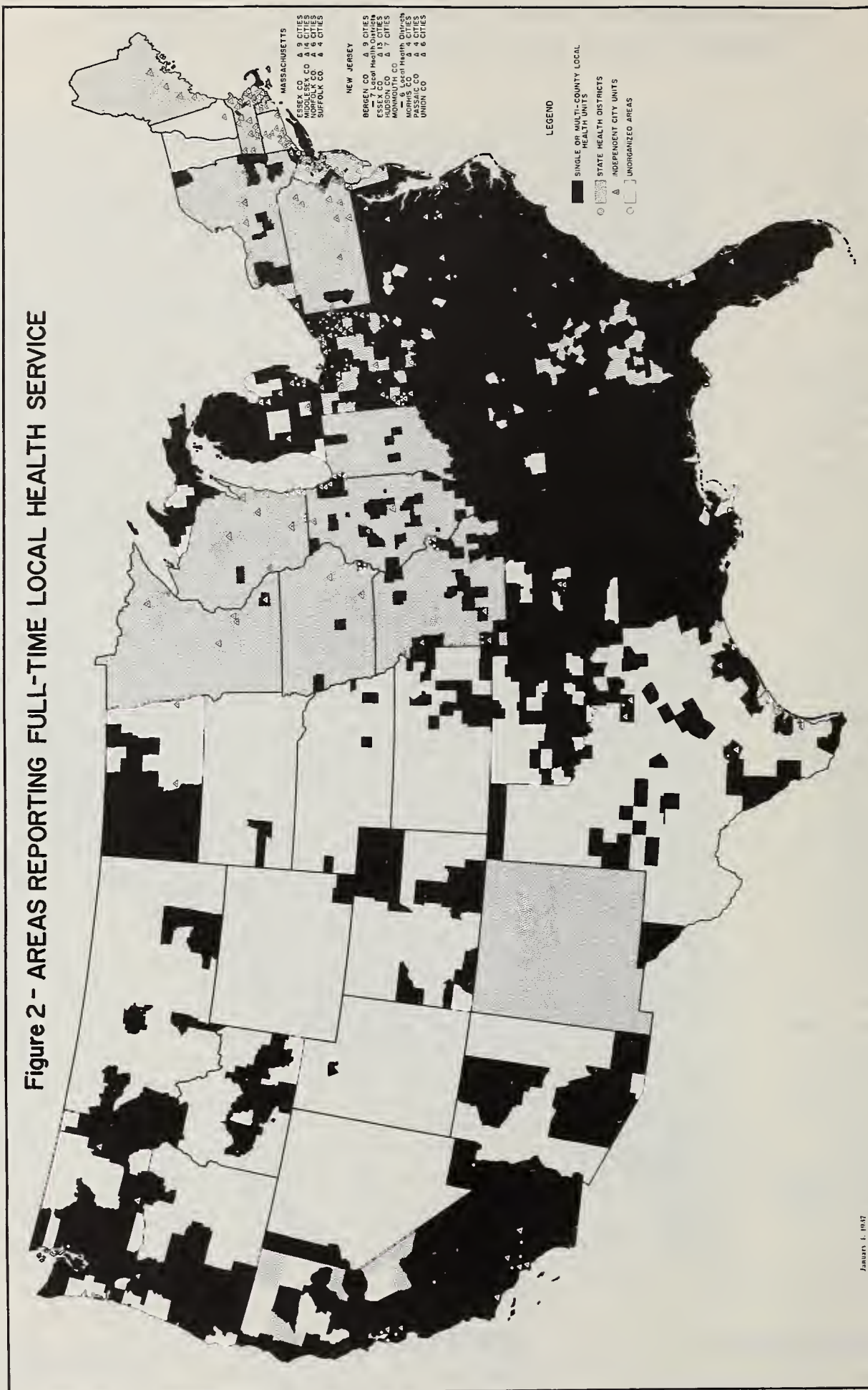


Figure 2 - AREAS REPORTING FULL-TIME LOCAL HEALTH SERVICE



January 1, 1957

DEPARTMENT OF COMMERCE

BUREAU OF THE CENSUS

SELECTED CHARACTERISTICS OF AREAS ORGANIZED FOR FULL-TIME LOCAL HEALTH SERVICE

Population Size of Areas Served

The number and percent of health units in various population groupings has remained about the same throughout the years. Although some consolidation of governmental units and merging of resources as well as sharing of personnel have been accomplished, and more are currently under way, there is still a definite need for further emphasis on the development of local health units to serve more populous areas. Health departments serving small population groups are at a distinct disadvantage in employing and supporting the professional and technical staff required to carry out modern health department services and responsibilities.

As reflected in table 4, more than one-third, or 36 percent, of the local health organizations reporting served populations of less than 35,000, despite the recognized fact that the minimum population of a jurisdiction should exceed this number for the most economical operation. Forty-seven percent of the single county units and 29 percent of the city health departments each have less than 35,000 people residing in the jurisdiction. Also, about one-fourth of the local health districts serve areas with a population under 35,000.

An additional 16 percent of the total organizations reporting have a population larger than 35,000 but below the recommended minimum of 50,000. Combined, units with less than 50,000 population represent about 52 percent of all jurisdictions. The proportion of units of each type in this combined group was as follows: Single county units, 62 percent; city health departments, 46 percent; local health districts, 48 percent; and State health districts, 6 percent.

Of the local health jurisdictions with populations in excess of 50,000, 25 percent were in the 50,000 to 100,000 grouping, 15 percent in the 100,000 to 250,000 grouping, 5 percent in the 250,000 to 500,000 grouping, and 3 percent in the grouping of 500,000 or over.

Land Area and Density of Population

The sparsity of population continues to be a real problem in planning for the establishment of a health jurisdiction in many sections of the country. Frequently, the expanse of areas containing the desirable minimum population is too large to permit operation of a health department on an effective and economical basis. The advantages of a compact area are many, the most significant ones being lower operating costs, better utilization of personnel, and accessibility to all residents of the area. Tables 5 and 6 give a distribution of health organizations according to land area and density of population of the jurisdictions, respectively. In both tables, the 265 city health departments have been excluded from consideration, because land area and number of persons per square mile have no particular significance in the provision of local health services in urban areas.

Table 4.--Distribution of Full-Time Health Organizations of Different Types,
According to Population of the Area Served
December 31, 1956

Population group ^{1/}	Percent of population served	All organized areas				Type of health organization							
		Organizations		Counties included		Single county		City health department		Local health district		State health district	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Totals	100.0	1,425	100.0	2,208	100.0	787	100.0	265	100.0	272	100.0	101	100.0
Under 35,000	7.1	513	36.0	493	22.3	369	46.9	77	29.0	65	23.9	2	2.0
35,000 - 50,000	6.7	234	16.4	298	13.5	121	15.4	44	16.6	65	23.9	4	4.0
50,000 - 100,000	16.4	356	25.0	537	24.3	166	21.1	66	24.9	113	41.5	11	10.9
100,000 - 250,000	21.1	207	14.5	424	19.2	88	11.2	45	17.0	28	10.3	46	45.5
250,000 - 500,000	16.7	72	5.1	321	14.6	28	3.5	14	5.3	1	0.4	29	28.7
500,000 and over	32.0	43	3.0	135	6.1	15	1.9	19	7.2	-	-	9	8.9

^{1/} Estimated as of January 1, 1957. 1950 Census data extrapolated to January 1, 1957, with adjustments made on the basis of State totals as estimated by the Bureau of the Census as of July 1, 1956.

Table 5.--Distribution of Full-Time Health Organizations of Different Types,
According to Land Area of Jurisdiction^{1/}
December 31, 1956

Area in square miles	Percent of population served	All organized areas				Type of health organization					
		Organizations		Counties included		Single county		Local health district		State health district	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Totals (exclusive of city health departments)	100.0	1,160	100.0	2,201	100.0	787	100.0	272	100.0	101	100.0
Under 1,000	49.7	783	67.5	853	38.8	668	84.9	99	36.4	16	15.9
1,000 - 2,500	23.1	231	19.9	519	23.6	84	10.6	126	46.3	21	20.8
2,500 - 4,000	6.6	48	4.1	140	6.4	15	1.9	25	9.2	8	7.9
4,000 - 5,500	4.1	24	2.1	98	4.4	9	1.1	6	2.2	9	8.9
5,500 - 7,000	5.5	23	2.0	163	7.4	4	0.5	7	2.6	12	11.9
7,000 - 8,500	3.6	16	1.4	126	5.7	3	0.4	4	1.5	9	8.9
8,500 - 10,000	2.9	11	0.9	106	4.8	2	0.3	1	0.3	8	7.9
10,000 and over	4.5	24	2.1	196	8.9	2	0.3	4	1.5	18	17.8

^{1/} Because land area has no particular significance in the provision of local health services in areas served by city health departments, the 265 reporting cities and the 7 counties covered by city health departments have been omitted from this table.

Table 6.--Distribution of Full-Time Health Organizations of Different Types,
According to Density of Population of Jurisdiction/
December 31, 1956

Number of persons per square mile	Percent of population served	All organized areas				Type of health organization					
		Organizations		Counties included		Single county		Local health district		State health district	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Totals (exclusive of city health departments)	<u>100.0</u>	<u>1,160</u>	<u>100.0</u>	<u>2,201</u>	<u>100.0</u>	<u>787</u>	<u>100.0</u>	<u>272</u>	<u>100.0</u>	<u>101</u>	<u>100.0</u>
Under 2	*	1	0.1	1	0.1	1	0.1	-	-	-	-
2 - 6	0.7	17	1.5	59	2.7	1	0.1	9	3.3	7	6.9
6 - 18	3.8	75	6.5	197	8.9	35	4.4	31	11.4	9	8.9
18 - 45	17.5	389	33.5	854	38.8	257	32.7	106	39.0	26	25.8
45 - 90	23.3	359	30.9	657	29.8	254	32.3	83	30.5	22	21.8
90 - 180	17.1	152	13.1	259	11.8	118	15.0	13	4.8	21	20.8
180 - 360	13.9	81	7.0	107	4.9	67	8.5	5	1.8	9	8.9
360 and over	23.7	86	7.4	67	3.0	54	6.9	25	9.2	7	6.9

1/ Because density has no particular significance in the provision of local health services in areas served by city health departments, the 265 reporting cities and the 7 counties covered by city health departments have been omitted from this table.

* Less than 0.05 percent.

The population of jurisdictions with a land area of less than 1,000 square miles accounted for approximately one-half of the total population residing in organized areas. Almost 68 percent of all reporting organizations, other than cities, and 39 percent of the counties covered were in this land area interval. Single county units made up a large proportion of the organizations serving areas of less than 1,000 square miles; 668 of the 787 county units, or 85 percent, were in this group. Of the 272 local health districts, 99 served areas encompassing less than 1,000 square miles. Sixteen of the 101 State health districts also were in this land area grouping.

Twenty percent of all jurisdictions and 24 percent of the organized counties included an area of between 1,000 and 2,500 square miles. Local health districts are predominant in this land area interval, with 46 percent of the reporting units of this type included in this group.

Although only 13 percent of the 1,160 units--excluding city units--were in land area groupings which exceed 2,500 square miles, the number of counties in these reporting health jurisdictions constituted nearly 38 percent of the total counties covered and 27 percent of the total population residing in organized areas. Nearly 44 percent of the organizations in this land area size were classified as State health districts in which a relatively high proportion of the counties have a land area in excess of 2,500 square miles.

The average number of persons per square mile in each reporting jurisdiction varied considerably. Table 6 shows the distribution of organizations--excluding city units--according to density of population. The density intervals of 18 to 45 and 45 to 90 included the largest representation of health units. About 33 percent of the units and 39 percent of the counties were in the first-mentioned interval, and approximately 31 percent of the units and 30 percent of the counties were in the interval of 45 to 90. The populations represented in these two density intervals amounted to 41 percent of the population served by the 1,160 organizations. Although the number of units and counties included in the density intervals which exceeded 90 persons per square mile was small, approximately 55 percent of the population resided in these areas. Single county health departments were the most prevalent type of unit in the higher density intervals.

Only 8 percent of the health jurisdictions had a population density of less than 18 persons per square mile. Of the total counties with full-time health service, 12 percent were in these jurisdictions. About five percent of the population was represented in these extremely sparsely settled areas.

FINANCIAL CAPACITY OF ORGANIZED AREAS AND EXPENDITURES IN SUCH AREAS FOR PUBLIC HEALTH

The economic status of a community as measured by per capita personal income is a significant factor in planning for the administration of full-time local public health services to meet the health needs of the community. It is an established fact that such needs are usually greater in areas with a low income level than in areas with a high income level. To obtain some concept of the financial capacity of each reporting health jurisdiction, the effective buying incomes^{1/} of residents in counties and cities during 1955 were used as the per capita income of each area.

The expenditure data presented are based on reports submitted for fiscal year 1956 by State health departments. State health departments are required to submit annually a report of expenditure of funds for public health purposes, by source, which includes funds expended by local health units. (Costs for construction and general hospital and tuberculosis sanatoria care are excluded.) It should be mentioned that expenditures were not reported for all operating units, and in some instances the data reported were unsatisfactory and were not included. Also, it was observed that the expenditures as reported were incomplete for some units. In total, data were either unavailable or unsatisfactory for 12 percent of the units. City health departments comprised the major portion of the units in the "no data" category.

The financial data, particularly the expenditure data, should be considered as index rather than absolute amounts. Generally, the total expenditures for local health units may be regarded as representing less than the actual amounts spent in such units. In some States, grants or subsidies and personnel and supplies, provided in full or in part by State health departments to local units, were not reported on an individual unit basis, but were reported in total as a single expenditure item. In such cases, these amounts could not be included as expenditures of specific local units.

Per Capita Income of Organized Areas

The increasing upward economic trend is reflected in table 7--Distribution of Full-Time Health Organizations of Different Types According to Per Capita Income. It will be noted that no jurisdictions are included in the under \$500 group. Although in 33 reporting organizations, serving about 100 counties, the average per capita income shifted within one year from under \$1,000 to \$1,000 and over, the \$500 to \$1,000 interval continues to include the highest proportion of the health units and counties--36 percent and 39 percent, respectively. This group comprised about 45 percent of

^{1/} Sales Management, "Survey of Buying," May 10, 1956.

Table 7.--Distribution of Full-Time Health Organizations of Different Types,
According to Per Capita Income

Per capita income interval	Percent of population served	All organized areas				Type of health organization							
		Organizations		Counties included		Single county		City health department		Local health district		State health district	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Totals	100.0	1,425	100.0	2,208	100.0	787	100.0	265	100.0	272	100.0	101	100.0
No data	3.4	57	4.0	41	1.8	-	-	20	7.6	19	7.0	18	17.8
Under \$500	-	-	-	-	-	-	-	-	-	-	-	-	-
\$500 - \$1,000	12.6	516	36.2	864	39.1	355	45.1	1	0.4	149	54.7	11	10.9
\$1,000 - \$1,500	26.9	433	30.4	969	43.9	280	35.6	15	5.6	81	29.8	57	56.4
\$1,500 - \$2,000	40.0	307	21.5	313	14.2	132	16.8	142	53.6	19	7.0	14	13.9
\$2,000 - \$2,500	15.9	85	6.0	19	0.9	18	2.3	62	23.4	4	1.5	1	1.0
\$2,500 and over	1.2	27	1.9	2	0.1	2	0.2	25	9.4	-	-	-	-

the single county units, 55 percent of the local health districts, 11 percent of the State health districts, and less than 1 percent of the city health departments. The number of persons residing in these jurisdictions represented almost 13 percent of the total population covered.

The per capita income interval of \$1,000 to \$1,500 comprised the second largest group of organizations and counties served, with 30 percent of the organizations and almost 44 percent of the counties included in this per capita range. The average income per person in areas covered by State health district organizations most frequently ranged within this interval; 56 percent of all units of this type were included in the \$1,000 to \$1,500 grouping. Over one-third of the single county units had a per capita income within this range.

The proportion of the population residing in organized areas within the specified income intervals was greatest in the \$1,500 to \$2,000 per capita income interval. In contrast, only 22 percent of all organizations and 14 percent of the total counties were in this interval. As would be expected, a relatively high percentage of the city health departments--54 percent--was in this particular grouping.

There were 112 jurisdictions serving 8 percent of the population in organized areas which had an average income of \$2,000 per person or over. Within the per capita income intervals exceeding \$2,000, there were 87 city health departments, 20 county units, 4 local health districts, and 1 State health district. No per capita income data were available for 57 reporting units.

Expenditures of Reporting Health Organizations

The reported expenditure of funds from different sources in each type of health organization is reflected in table 8. It will be noted that 46 percent of the overall expenditure of nearly \$173 million was reported in city health departments, although such departments constituted only about 14 percent of the organizations for which expenditures are included; the population represented in these organizations amounted to 32 percent of the total population. Single county units, which represented 62 percent of the organizations and included 40 percent of the population, accounted for 41 percent of the total expenditures. Amounts spent in local health districts and State health districts represented approximately 8 and 5 percent, respectively, of the overall expenditure. The population residing in these districts accounted for more than one-fourth of the organized population.

Forty-six percent of the Federal funds were expended in single county units, more than 80 percent of which had a per capita income of less than \$1,500. The highest proportion of funds derived from State and local sources was expended in city health departments, the percentages amounting to 42 and 48, respectively.

Table 8.--Expenditures in Full-Time Health Organizations, by Source of Funds
and by Type of Organization

Type of organization	Total organizations for which expenditures were reported ^{1/}	Source of funds							
		Total funds		State		Local		Federal	
		Number	Percent	Amount	Percent	Amount	Percent	Amount	Percent
Totals	1,254	100.0	\$172,543,218	100.0	\$38,405,279	100.0	\$123,395,643	\$10,742,296	100.0
Single county	773	61.7	71,074,545	41.2	14,749,821	38.4	51,397,839	4,926,885	45.9
City health department	175	14.0	79,185,149	45.9	16,291,676	42.4	59,667,776	3,225,697	30.0
Local health district	235	18.7	13,697,798	7.9	4,172,803	10.9	8,096,115	1,428,880	13.3
State health district	70	5.6	8,585,726	5.0	3,190,979	8.3	4,233,913	1,160,834	10.8

^{1/} Expenditure information for 172 of the 1,425 reporting units was either unsatisfactory or unavailable.

Figure 3 shows the proportion of funds from each source--State, local and Federal--which comprised the overall expenditure of each type of organization. Approximately 72 percent of the total outlay of all organizations was reported as local funds; 22 percent as State funds; and 6 percent as Federal funds. The pattern of expenditures among the four types of organizations varied somewhat. The major portion of financial support came from local sources. About 75 percent of the expenditures in city health departments, 72 percent of the expenditures in single county units, 59 percent of the expenditures in local health districts, and 49 percent of the expenditures in State health districts were reported as local funds. The ratio of Federal funds expended to the total expenditures reported in State health districts was higher in such districts than in any other type of unit.

Public health administrators have recognized for some time that the once recommended \$1.50 per capita for providing basic minimum local health services is no longer sufficient to operate a comprehensive public health program. However, the reported data indicate that expenditures in local health units in 1956 represented an average outlay of only \$1.28 per person. (See table 9.) Computed on a State basis, the median per capita expenditure in local health units was \$1.12. Among the 44 States for which expenditures were included--exclusive of the District of Columbia for which the expenditure per person amounted to \$4.75--the range in per capita expenditure for local health services was from 37 cents in Nevada to \$1.96 in Maryland. The average per capita expenditure of funds, according to source, for the 44 States and the District of Columbia was as follows: State funds, 28 cents; local funds, 92 cents; and Federal funds, 8 cents.

A distribution of reporting organizations according to per capita expenditures is shown in table 10. The largest percent of units was included in the expenditure interval of \$0.50 to \$1.00. Almost 36 percent of the reporting organizations appeared in this interval. Approximately 47 percent of the single county units, 35 percent of the local health districts, 29 percent of the State health districts, and 8 percent of the city health departments were in this per capita expenditure group. This grouping also included 33 percent of the counties and 22 percent of the population in organized areas.

The per capita expenditure interval of \$1.00 to \$1.50 constituted the second largest representation of organizations. About 29 percent of the reporting units, 24 percent of the total counties, and one-fourth of the total population were included in this range. More of the city health departments with reported expenditures were concentrated in this grouping than in any other.

Health departments spending in excess of \$1.50 were relatively few; only 16 percent had a reported outlay of over \$1.50 per person. However, close to one-third of the population was represented in the per capita expenditure intervals exceeding \$1.50. To the other extreme, 7 percent had a reported expenditure which amounted to less than 50 cents per capita. Eleven percent of the population and 21 percent of all the counties in full-time health organizations were represented in the group spending less than 50 cents per

FIGURE 3.—PERCENT OF FUNDS EXPENDED FROM DIFFERENT SOURCES IN EACH TYPE OF FULL-TIME HEALTH ORGANIZATION

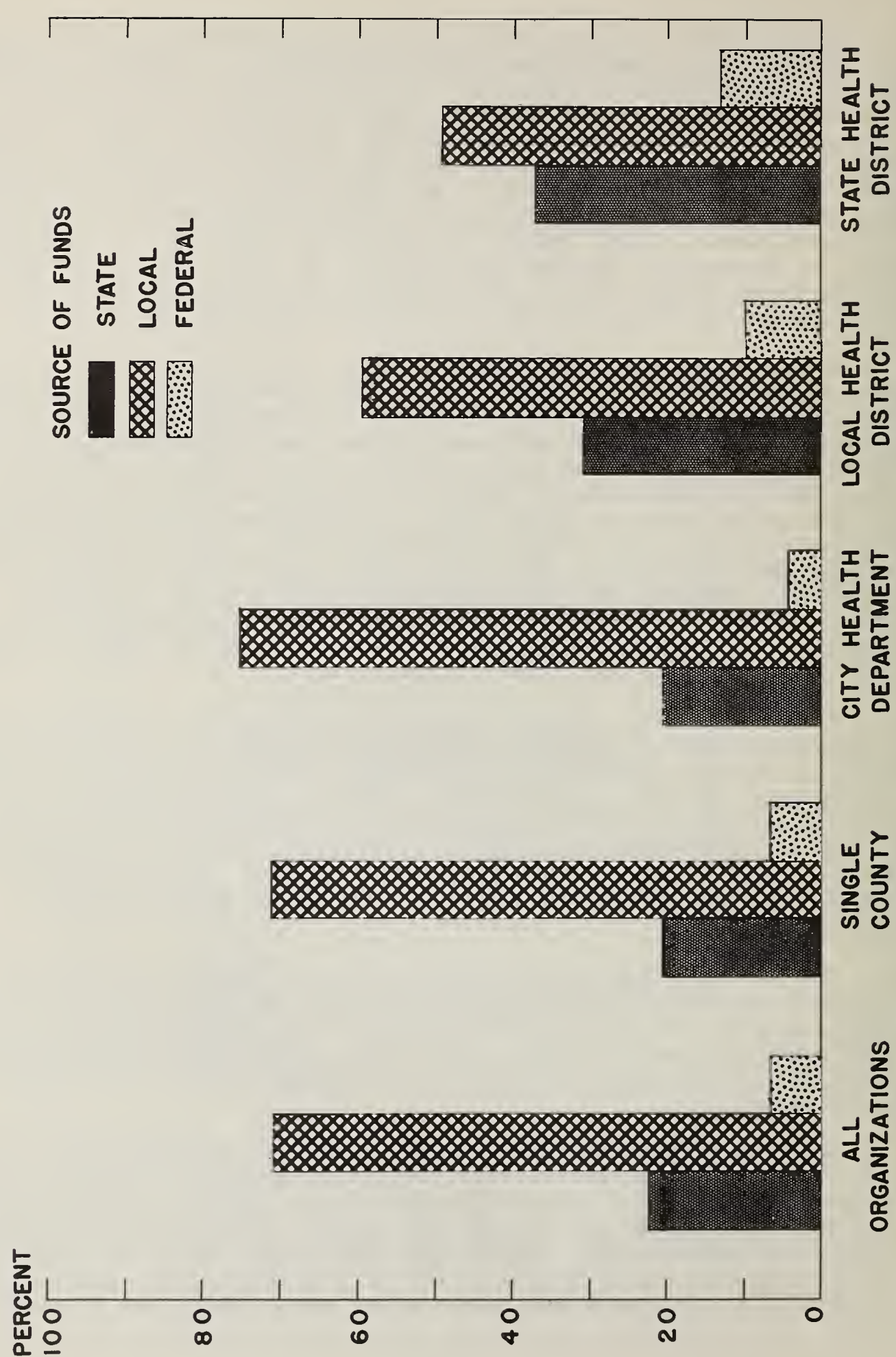


Table 9.--Amount of Funds Expended and Per Capita Expenditure of Funds, by Source,
in all Types of Full-Time Health Organizations in Each State

State	Number and population of units for which expenditures were reported		Funds expended, by source, and per capita expenditure					
			Total Funds		State		Local	
	Number	Population	Amount	Per capita	Amount	Per capita	Amount	Per capita
Totals	1,253	134,470,100	\$172,543,218	\$1.28	\$38,403,279	\$0.28	\$123,395,643	\$0.92
Alabama	67	3,186,000	2,751,101	0.86	360,994	0.11	1,894,740	0.59
Arizona	4	743,500	730,872	0.98	27,870	0.04	577,452	0.77
Arkansas	27	1,674,600	932,583	0.56	308,289	0.18	549,070	0.33
California	51	13,017,200	23,048,097	1.77	4,040,560	0.31	18,409,465	1.41
Colorado	10	1,248,600	1,692,657	1.36	44,578	0.04	1,536,836	1.23
Connecticut	11	1,007,200	1,357,940	1.35	85,540	0.09	1,249,722	1.24
Delaware	4	409,500	234,303	.57	162,684	0.40	71,619	0.17
District of Columbia	1	872,500	4,145,859	4.75	3,474,276	3.98	671,583	0.77
Florida	37	3,558,300	4,294,168	1.21	1,300,829	0.37	2,774,206	0.78
Georgia	34	2,475,500	3,254,954	1.32	1,212,689	0.49	1,954,430	0.79
Idaho	5	397,100	377,638	0.95	2,407	0.01	225,082	0.56
Illinois	36	9,443,600	7,730,574	0.82	1,125,542	0.12	6,376,622	0.67
Indiana	15	4,417,700	2,350,204	0.53	491,448	0.11	1,715,982	0.39
Iowa	1	42,300	70,788	1.67	-	-	63,855	1.51
Kansas	14	1,026,700	1,176,202	1.15	43,998	0.04	1,075,543	1.05
Kentucky	120	3,023,000	2,612,653	0.86	1,030,560	0.34	1,329,426	0.44
Louisiana	61	2,999,200	3,241,541	1.08	694,158	0.23	2,247,648	0.75
Maine	24	2,883,500	5,642,676	1.96	595,334	0.21	4,738,830	1.64
Maryland	12	2,339,700	2,082,663	0.89	102,359	0.04	1,794,176	0.77
Massachusetts	46	6,811,700	8,626,307	1.27	381,524	0.06	7,566,758	1.11
Michigan	13	3,219,400	2,035,120	0.63	175,925	0.05	1,641,948	0.51
Minnesota	58	2,070,700	2,120,564	1.02	504,631	0.24	1,145,883	0.55
Mississippi	40	4,148,400	4,635,797	1.12	370,043	0.09	3,971,322	0.96
Missouri	4	127,500	182,226	1.43	11,321	0.09	160,190	1.26
Montana	4	542,900	823,421	1.52	-	-	731,570	1.35
Nebraska	2	162,600	60,066	0.37	-	-	38,685	0.24
Nevada	-	-	-	-	-	-	-	-
New Hampshire	82	5,394,500	7,491,596	1.39	539,394	0.10	6,008,258	1.11
New Jersey	10	825,000	606,941	0.74	155,391	0.19	408,692	0.50
New Mexico	41	16,230,500	28,730,114	1.77	14,379,869	0.88	13,720,471	0.85
North Carolina	67	4,426,300	5,620,431	1.27	1,180,304	0.27	4,235,774	0.95
North Dakota	7	363,600	399,999	1.10	-	-	333,999	0.92
Ohio	61	7,199,100	10,150,952	1.41	809,438	0.11	8,889,215	1.24
Oklahoma	14	1,344,000	1,127,570	0.84	172,587	0.13	862,340	0.64
Oregon	16	1,469,100	1,942,964	1.32	199,939	0.06	1,799,708	1.22
Pennsylvania	4	3,096,000	5,236,565	1.69	-	-	4,816,094	1.56
Rhode Island	46	2,078,100	2,331,314	1.12	1,057,767	0.51	960,465	0.46
South Carolina	1	43,800	65,888	1.50	1,998	0.04	53,869	1.23
South Dakota	57	3,372,100	3,068,158	0.91	833,783	0.25	1,772,960	0.52
Tennessee	46	6,105,900	6,259,467	1.03	336,478	0.06	5,366,018	0.88
Texas	1	43,400	36,750	.85	-	-	27,950	0.65
Utah	-	-	-	-	-	-	-	-
Vermont	40	3,097,900	4,590,594	1.48	1,769,609	0.57	2,479,584	0.80
Virginia	18	2,371,700	3,875,209	1.63	109,419	0.05	3,637,464	1.53
Washington	30	1,814,600	1,058,121	0.58	120,000	0.06	886,667	0.49
West Virginia	10	3,266,500	3,694,893	1.13	191,744	0.06	3,341,305	1.02
Wisconsin	1	59,100	44,318	0.75	-	-	25,369	0.43
Wyoming	-	-	-	-	-	-	-	-
Totals	1,253	134,470,100	\$172,543,218	\$1.28	\$38,403,279	\$0.28	\$123,395,643	\$0.92
Alabama	67	3,186,000	2,751,101	0.86	360,994	0.11	1,894,740	0.59
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Indiana	15	4,417,700	2,350,204	0.53	491,448	0.11	1,715,982	0.39
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Maryland	12	2,339,700	2,082,663	0.89	102,359	0.04	1,794,176	0.77
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Michigan	13	3,219,400	2,035,120	0.63	175,925	0.05	1,641,948	0.51
Minnesota	58	2,070,700	2,120,564	1.02	504,631	0.24	1,145,883	0.55
Mississippi	40	4,148,400	4,635,797	1.12	370,043	0.09	3,971,322	0.96
Missouri	4	127,500	182,226	1.43	11,321	0.09	160,190	1.26
Montana	4	542,900	823,421	1.52	-	-	731,570	1.35
Nebraska	2	162,600	60,066	0.37	-	-	38,685	0.24
Nevada	-	-	-	-	-	-	-	-
New Hampshire	82	5,394,500	7,491,596	1.39	539,394	0.10	6,008,258	1.11
New Jersey	10	825,000	606,941	0.74	155,391	0.19	408,692	0.50
New Mexico	41	16,230,500	28,730,114	1.77	14,379,869	0.88	13,720,471	0.85
North Carolina	67	4,426,300	5,620,431	1.27	1,180,304	0.27	4,235,774	0.95
North Dakota	7	363,600	399,999	1.10	-	-	333,999	0.92
Ohio	61	7,199,100	10,150,952	1.41	809,438	0.11	8,889,215	1.24
Oklahoma	14	1,344,000	1,127,570	0.84	172,587	0.13	862,340	0.64
Oregon	16	1,469,100	1,942,964	1.32	199,939	0.06	1,799,708	1.22
Pennsylvania	4	3,096,000	5,236,565	1.69	-	-	4,816,094	1.56
Rhode Island	46	2,078,100	2,331,314	1.12	1,057,767	0.51	960,465	0.46
South Carolina	1	43,800	65,888	1.50	1,998	0.04	53,869	1.23
South Dakota	57	3,372,100	3,068,158	0.91	833,783	0.25	1,772,960	0.52
Tennessee	46	6,105,900	6,259,467	1.03	336,478	0.06	5,366,018	0.88
Texas	1	43,400	36,750	.85	-	-	27,950	0.65
Utah	-	-	-	-	-	-	-	-
Vermont	40	3,097,900	4,590,594	1.48	1,769,609	0.57	2,479,584	0.80
Virginia	18	2,371,700	3,875,209	1.63	109,419	0.05	3,637,464	1.53
Washington	30	1,814,600	1,058,121	0.58	120,000	0.06	886,667	0.49
West Virginia	10	3,266,500	3,694,893	1.13	191,744	0.06	3,341,305	1.02
Wisconsin	1	59,100	44,318	0.75	-	-	25,369	0.43
Wyoming	-	-	-	-	-	-	-	-

1/ Expenditure information unsatisfactory or unavailable.

2/ Vermont has no full-time health organizations rendering local health service.

Table 10.--Distribution of Full-Time Health Organizations of Different Types,
According to Per Capita Expenditure

Per capita expenditure interval	Percent of population served	All organized areas				Type of health organization							
		Organizations		Counties included		Single county		City health department		Local health district		State health district	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Totals	100.0	1,425	100.0	2,208	100.0	787	100.0	265	100.0	272	100.0	101	100.0
No data	9.9	172	12.1	282	12.8	14	1.8	90	34.0	37	13.6	31	30.7
Under \$0.50	10.8	106	7.4	452	20.5	45	5.7	11	4.2	20	7.3	30	29.7
\$0.50 - \$1.00	22.4	511	35.9	735	33.3	368	46.7	20	7.5	94	34.5	29	28.7
\$1.00 - \$1.50	25.0	410	28.8	532	24.1	250	31.8	63	23.8	87	32.0	10	9.9
\$1.50 - \$2.00	17.4	161	11.3	167	7.5	85	10.8	47	17.7	28	10.3	1	1.0
\$2.00 - \$2.50	10.4	41	2.9	27	1.2	15	1.9	22	8.3	4	1.5	-	-
\$2.50 - \$3.00	1.9	10	0.7	9	0.4	6	0.8	3	1.1	1	0.4	-	-
\$3.00 and over	2.2	14	0.9	4	0.2	4	0.5	9	3.4	1	0.4	-	-

person. Within this group were 30 percent of the State health districts, which include a relatively high proportion of the organized counties. This fact accounts for the large number of counties with such a low per capita expenditure. It is recognized that the expenditures reported for State health districts in some States were extremely low because of variations in the administration and organization of State health services.

A comparison of expenditures from State, local, and Federal funds on a per capita basis has been made for each type of health unit in relation to the population size of the area served. (See table 11.) The per capita expenditure of funds from all sources for all types of units ranged from \$1.02 per person in units with populations of between 50,000 and 100,000 to \$1.63 in units with a population of 500,000 or more. As might be expected, per capita expenditures in all population intervals were higher for city health departments than any other type of organization. For all organizations, the highest per capita expenditure of State funds occurred in units in the lowest and highest population intervals. The largest per capita expenditure of funds from local sources occurred in jurisdictions in the highest population interval. Units in the population interval of under 35,000 had the highest average per capita expenditure of Federal funds--11 cents; the lowest per capita expenditure of Federal funds--6 cents per person--was reflected in units of 500,000 population and over.

It will be observed that, except in city health departments, the amount of State-appropriated funds expended per person was highest in units of less than 35,000. With the exception of State health districts, expenditure of local monies was higher on a per capita basis in units exceeding 250,000 population than in units with smaller population. The highest per capita expenditure of Federal funds prevailed in units with populations under 50,000, except in the instance of State health districts.

The pattern of per capita expenditure of funds from various sources in single county units in the several population-size groupings closely paralleled that shown for all organizations. For all population intervals, the per capita outlay in counties averaged \$1.22 or 6 cents less than the national average. In county units of 500,000 and over the amount spent per person was only 5 cents less than the national average for this interval. The high expenditure of funds in units of this size was primarily reflected in funds derived from local sources.

The average per capita expenditure in city health departments was highest in cities with populations ranging between 250,000 and 500,000. Cities of this size had an average expenditure per person of \$2.06; of this amount, 23 cents was derived from State funds, \$1.74 from local funds, and 9 cents from Federal funds.

In State health districts, the highest per capita expenditure from all sources was \$1.33 and in local health districts \$1.25. These averages prevailed in State and local districts serving less than 35,000 persons.

Table 11.--Per Capita Expenditure of Full-Time Health Organizations of Different Types, According to Population of the Jurisdiction Served and the Source of Funds Expended

Type of organization and source of funds	All intervals	Per capita expenditure, by population interval					
		Under 35,000	35,000-50,000	50,000-100,000	100,000-250,000	250,000-500,000	500,000 and over
ALL ORGANIZATIONS							
Total	\$ 1.28	\$ 1.05	\$ 1.03	\$ 1.02	\$ 1.09	\$ 1.23	\$ 1.63
State	.28	.36	0.29	.27	.21	.19	.36
Local	.92	.58	.62	.66	.78	.97	1.21
Federal	.08	.11	.12	.09	.10	.07	.06
SINGLE COUNTY							
Total	1.22	.97	.94	1.02	1.14	1.45	1.58
State	.25	.38	.24	.26	.18	.23	.27
Local	.88	.48	.58	.67	.86	1.16	1.26
Federal	.09	.11	.12	.09	.10	.06	.05
CITY HEALTH DEPARTMENT							
Total	1.82	1.39	1.49	1.26	1.49	2.06	1.92
State	.37	.08	.17	.22	.23	.23	.45
Local	1.37	1.18	1.20	.96	1.18	1.74	1.40
Federal	.08	.13	.12	.08	.08	.09	.07
LOCAL HEALTH DISTRICT							
Total	1.01	1.25	1.03	.92	1.08	1.18	-
State	.31	.44	.43	.28	.22	.03	-
Local	.60	.68	.49	.54	.76	1.05	-
Federal	.10	.13	.11	.10	.10	.10	-
STATE HEALTH DISTRICT							
Total	.45	1.33	1.15	.91	.62	.42	.25
State	.17	.58	.37	.51	.27	.12	.09
Local	.22	.75	.74	.32	.25	.24	.14
Federal	.06	-	.04	.08	.10	.06	.02

Table 12 shows the distribution of health organizations in the various per capita income intervals according to the average amount spent per person in each jurisdiction for which expenditure data were available. This table reflects for all organizations combined a concentration of units in the per capita expenditure range of \$0.60 to \$1.20, with a relatively small proportion of the units grouped in lower and higher intervals. Similarly, this pattern prevails for single county units and local health districts. Some divergence from this pattern is evident in city health departments and State health districts. Over half the city health units had reported expenditures which exceeded \$1.40, most of which had per capita incomes above \$1,500. Only five of the State health districts had an expenditure which exceeded \$1.20 per capita; more than half the organizations of this type were within the per capita expenditure grouping of less than \$0.60.

Table 12.--Number of Full-Time Health Organizations of Different Types in Each Designated Per Capita Expenditure Interval, Grouped According to the Per Capita Income of the Jurisdiction

Type of organization and per capita income interval	Total organizations for which expenditures were reported	Number of organizations in each per capita expenditure grouping										
		Under \$0.20	\$0.20-0.40	\$0.40-0.60	\$0.60-0.80	\$0.80-1.00	\$1.00-1.20	\$1.20-1.40	\$1.40-1.60	\$1.60-1.80	\$1.80-2.00	\$2.00 and over
ALL ORGANIZATIONS	1,253	18	40	123	212	224	205	148	110	63	45	65
No data	31	1	3	4	3	5	7	2	3	1	2	-
Under \$ 500	-	-	-	-	-	-	-	-	-	-	-	-
\$ 500 - \$1,000	489	2	14	74	101	112	78	48	34	14	7	5
\$1,000 - \$1,500	397	6	17	35	77	71	67	50	33	17	10	14
\$1,500 - \$2,000	238	7	6	7	24	29	36	38	25	17	17	32
\$2,000 - \$2,500	75	1	-	3	5	4	15	8	10	13	6	10
\$2,500 and over	23	1	-	-	2	3	2	2	5	1	3	4
SINGLE COUNTY	773	2	15	83	153	160	125	93	63	33	21	25
No data	-	-	-	-	-	-	-	-	-	-	-	-
Under \$ 500	-	-	-	-	-	-	-	-	-	-	-	-
\$ 500 - \$1,000	350	1	7	53	79	85	56	30	23	9	3	4
\$1,000 - \$1,500	275	-	7	24	52	56	50	34	25	11	9	7
\$1,500 - \$2,000	128	-	1	5	19	19	17	25	11	11	9	11
\$2,000 - \$2,500	18	1	-	1	3	-	2	4	3	2	-	2
\$2,500 and over	2	-	-	-	-	-	-	-	1	-	-	1
CITY HEALTH DEPARTMENT	175	6	4	2	6	13	32	19	23	19	17	34
No data	8	-	-	-	1	-	4	2	-	-	1	-
Under \$ 500	-	-	-	-	-	-	-	-	-	-	-	-
\$ 500 - \$1,000	1	-	-	1	-	-	-	-	-	-	-	-
\$1,000 - \$1,500	9	1	-	-	-	-	1	1	1	1	-	4
\$1,500 - \$2,000	83	4	4	-	1	6	13	10	11	6	8	20
\$2,000 - \$2,500	53	-	-	1	2	4	12	4	7	11	5	7
\$2,500 and over	21	1	-	-	2	3	2	2	4	1	3	3
LOCAL HEALTH DISTRICT	235	1	8	22	36	47	42	33	23	11	6	6
No data	17	-	2	2	1	5	2	-	3	1	1	-
Under \$ 500	-	-	-	-	-	-	-	-	-	-	-	-
\$ 500 - \$1,000	128	1	6	18	21	26	21	16	10	5	3	1
\$1,000 - \$1,500	69	-	-	2	12	12	13	14	7	5	1	3
\$1,500 - \$2,000	18	-	-	-	2	4	5	3	3	-	1	1
\$2,000 - \$2,500	3	-	-	-	-	-	1	-	-	-	-	-
\$2,500 and over	-	-	-	-	-	-	-	-	-	-	-	-
STATE HEALTH DISTRICT	70	9	13	16	17	4	6	3	1	0	1	0
No data	6	1	1	2	1	-	1	-	-	-	-	-
Under \$ 500	-	-	-	-	-	-	-	-	-	-	-	-
\$ 500 - \$1,000	10	-	1	2	1	1	1	2	1	-	1	-
\$1,000 - \$1,500	44	5	10	9	13	3	3	1	-	-	-	-
\$1,500 - \$2,000	9	3	1	2	2	-	1	-	-	-	-	-
\$2,000 - \$2,500	1	-	-	1	-	-	-	-	-	-	-	-
\$2,500 and over	-	-	-	-	-	-	-	-	-	-	-	-

PERSONNEL ENGAGED IN LOCAL PUBLIC HEALTH PROGRAMS

Employees of all official agencies engaged in local public health services numbered 49,082 as of December 31, 1956, according to the reports submitted. These agencies included full-time local health organizations--units, departments, boards, and commissions of health--and other governmental agencies such as boards of education and welfare departments which engage in local public health work. Included also in the total are 401 public health nurses employed by voluntary agencies and working full time under contract for official health agencies. No other personnel data are requested for nonofficial agencies.

The majority of the workers were employees of official health agencies and are presented first. (See table 13.) Employees of other official agencies are shown in table 26.

Personnel Employed by Official Health Agencies

Distribution of Personnel Among States

As shown in table 13, the number of full-time employees of official health agencies totaled 38,949, including the 401 nurses in voluntary agencies working full time under contract for health departments. Approximately two-thirds of the total workers were reported by local official health agencies of 13 States. These States, which include approximately 60 percent of the country's population with full-time local health service, were as follows: New York, California, Ohio, Illinois, Michigan, Texas, New Jersey, Massachusetts, Georgia, Pennsylvania, North Carolina, Maryland, and Florida. To the other extreme, health units in 9 States employed less than 100 employees per State. These organizations served one percent of the population in organized areas.

The total health department personnel reported in 1956 constituted an increase of 566 workers over 1955, or slightly more than 1 percent. On a percentage basis, this increase in personnel was less than the estimated population increase of the health jurisdictions during the year. Enlarged staffs were reflected in 34 States, the increases ranging from 1 to 183 employees. California accounted for the largest increase. In 14 States, however, a reduction in personnel was noted. These reductions ranged from 2 to 188 workers. The State of Minnesota accounted for a decrease of 130, this decrease was largely attributed to a change in the reporting of nurses. Approximately 100 public health nurses previously reported as employed by health departments were reported as "other official agency" personnel in 1956.

Professional and technical personnel represented approximately 70 percent of the overall total of public health workers. The nursing group was by far the largest category of personnel. Public health nurses numbered 12,956 and constituted approximately one-third of the personnel employed by official health agencies. In addition, there were 633 clinic nurses employed.

Table 13.--Number of Full-Time Personnel of Different Classifications Employed by Official Health Agencies
in Local Areas with Full-Time Health Organization
December 31, 1956

State	Total	Public Health Physicians	Public Health Nurses	Clinic Nurses	Public Health Dentists	Dental Hygienists	Engineers	Professional Sanitationists	Other Sanitation Personnel	Veterinarians	Laboratory Personnel	Health Educators	Nutritionists	Medical Social Workers	Psychiatric Social Workers	Psychologists	Analysts and Statisticians	Public Health Investigators	X-ray Technicians	Physical Therapists	Administrative Management Personnel	Clerks	Maintenance and Service Personnel	All Other	
Totals	38,942	1,431	12,952	633	281	377	367	4,674	2,641	265	1,290	259	102	173	111	59	183	329	313	140	453	8,645	1,837	1,430	
Alabama	649	33	200	1	1	1	4	23	137	9	13	2	-	-	3	2	2	5	1	-	4	149	33	26	
Arizona	169	6	51	11	-	1	1	12	32	-	-	1	-	-	-	-	-	4	1	-	2	33	10	1	
Arkansas	250	6	92	3	-	-	-	57	-	-	-	-	-	-	-	-	-	4	-	-	-	84	2	3	
California	4,195	202	1,141	190	17	12	18	736	61	10	160	40	8	38	14	4	62	59	41	41	43	1,013	158	127	
Colorado	424	12	148	11	-	1	2	85	11	3	11	5	-	-	-	-	1	1	3	2	4	76	14	34	
Connecticut	424	17	204	2	1	21	3	37	21	2	15	2	-	-	-	-	2	1	4	1	4	75	8	4	
Delaware	99	5	48	-	3	2	-	13	1	-	3	-	-	-	-	-	1	10	-	-	-	-	-	-	
Dist. of Columbia	688	32	122	-	11	21	3	53	-	12	25	4	1	39	7	6	5	16	7	8	13	160	110	35	
Florida	1,039	52	391	11	7	1	8	85	126	1	3	6	-	2	4	4	3	21	9	1	22	207	29	53	
Georgia	1,311	37	478	44	5	5	34	146	25	7	19	3	6	1	5	3	3	21	14	1	5	292	64	93	
Idaho	90	3	43	2	-	-	1	16	-	-	4	-	-	-	-	-	-	2	-	-	-	-	4	-	
Illinois	1,690	51	687	7	48	3	23	26	206	11	73	17	10	-	7	1	2	35	7	2	13	314	70	77	
Indiana	526	7	241	2	-	-	11	46	71	4	9	7	6	-	-	-	2	5	1	-	-	85	14	15	
Iowa	292	1	195	4	-	-	8	32	11	4	6	1	-	-	-	-	2	2	-	1	1	24	6	2	
Kansas	250	12	89	4	1	-	3	62	4	1	5	2	-	-	1	-	2	2	1	-	1	54	6	2	
Kentucky	652	30	223	1	2	2	1	47	96	-	4	2	1	1	-	-	2	1	4	-	31	189	11	6	
Louisiana	805	25	215	1	-	2	-	170	25	4	1	5	1	2	-	-	-	10	11	-	2	224	91	18	
Maine	135	8	63	1	-	6	5	7	9	-	-	2	2	2	1	2	-	-	2	-	1	21	-	3	
Maryland	1,138	40	427	16	4	8	8	152	25	8	39	5	2	7	3	3	8	1	12	4	18	282	36	30	
Massachusetts	1,330	39	523	7	44	60	12	85	161	3	35	7	10	11	1	-	2	7	9	9	36	197	49	23	
Michigan	1,679	59	588	49	17	8	20	129	196	34	45	12	3	2	3	-	10	4	14	2	13	427	20	24	
Minnesota	285	13	84	2	6	6	10	49	16	1	8	2	-	2	-	-	1	-	-	-	3	70	8	4	
Mississippi	582	42	222	2	7	-	-	109	-	1	5	4	-	-	-	-	1	-	-	-	-	138	46	12	
Missouri	942	31	207	4	7	1	29	121	147	11	27	3	3	3	11	5	1	6	8	-	7	227	43	40	
Montana	35	3	21	-	1	-	-	3	4	-	-	1	-	-	-	-	-	1	-	-	-	6	-	2	
Nebraska	134	2	47	2	3	-	3	28	4	-	10	3	-	-	-	-	3	1	-	-	1	23	2	2	
Nevada	20	2	8	-	-	-	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	
New Hampshire	31	1	16	-	-	-	-	4	-	1	1	-	-	-	-	-	-	-	-	-	-	2	6	-	
New Jersey	1,469	10	551	34	6	10	9	158	128	7	55	4	4	11	-	-	-	37	5	5	62	264	63	49	
New Mexico	156	11	62	4	-	-	-	27	-	-	-	-	-	-	-	-	-	1	1	-	-	50	-	-	
New York	6,354	154	1,788	24	39	184	68	463	327	23	345	54	28	29	12	6	42	7	73	64	103	1,576	483	462	
North Carolina	1,232	67	488	28	6	-	4	297	21	7	31	12	2	1	8	7	1	10	7	-	-	256	53	16	
North Dakota	77	2	40	-	22	-	1	18	1	-	2	-	-	-	-	-	4	12	-	-	1	12	-	-	
Ohio	1,918	96	633	23	22	-	13	356	143	50	42	15	6	2	-	-	-	13	6	-	15	396	52	31	
Oklahoma	391	19	155	3	3	-	1	73	34	1	7	2	-	-	1	2	-	-	-	-	-	80	6	5	
Oregon	333	18	131	9	-	1	1	54	7	7	8	2	-	2	4	-	-	1	2	-	3	65	7	9	
Pennsylvania	1,294	36	395	18	15	5	23	111	135	16	55	12	3	5	7	5	11	9	14	-	14	308	86	11	
Rhode Island	136	6	47	13	-	2	2	12	16	3	6	3	-	-	-	-	2	3	6	1	1	23	1	14	
South Carolina	553	27	196	15	2	3	2	101	25	-	11	3	-	-	-	-	-	8	6	-	6	119	20	6	
South Dakota	11	-	4	-	-	-	-	2	-	-	1	-	-	-	-	-	-	1	-	-	1	1	-	2	
Tennessee	647	36	244	10	2	-	6	195	2	-	21	2	1	1	-	-	2	9	9	-	1	154	21	22	
Texas	1,554	48	335	33	4	1	19	206	234	17	73	7	2	3	7	1	6	14	10	-	7	297	92	138	
Utah	11	1	7	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	
Vermont	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Virginia	1,028	56	334	10	-	-	-	196	41	1	35	2	-	4	3	1	4	9	9	-	5	241	57	18	
Washington	733	27	258	30	-	-	1	133	32	4	35	4	1	5	7	2	1	5	11	-	3	143	19	12	
West Virginia	286	9	111	3	4	-	-	69	5	6	3	-	-	2	2	1	-	2	1	-	1	67	9	1	
Wisconsin	894	36	399	8	-	10	11	46	101	-	38	3	3	-	-	-	1	2	4	-	7	186	26	3	
Wyoming	8	1	4	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	

1/ Includes 401 public health nurses employed by voluntary agencies who are under contract to provide service to the official health agency.

* Vermont has no full-time health organizations rendering local health service.

The total number of full-time public health physicians employed in 1956 by local health organizations was 57 less than in 1955. Health units in 22 States reported fewer physicians employed in 1956 than in 1955. In many areas, a vacancy in the position of health officer exists.

Sanitation personnel, which constituted approximately one-fifth of the overall staff of reporting health departments, comprised the second largest group of professional and technical public health workers in local areas. Within the general category of sanitation workers, included are engineers, professionally trained sanitarians, nongraduate personnel engaged in general sanitation activities, and veterinarians. Engineers totaled 367 and were employed in 35 States. The 4,674 professional sanitarians which comprised the largest proportion of sanitation workers were distributed among all States. A total of 2,641 "other sanitation personnel" was reported; workers in this category were represented in the reports of one or more local departments in all States except 10. Veterinarians had a comparatively small representation on the staff of most local health departments; only 265 were reported employed in 1956 by local units in 30 States. Inconsistent reporting, prevents accurate comparison with the previous year of the number of professional sanitarians and "other sanitation" personnel employed. It is apparent that some shifting of personnel from one category to another occurs from year to year. When all types of sanitation workers were combined, however, an increase of 200 in workers responsible for community sanitation was reflected over 1955.

The number of laboratory workers serving in local areas remained about the same in 1956 as in 1955. There were seven States in which no laboratory workers were employed locally. State laboratories through either headquarters or branch laboratories provide services to many of the local areas.

Other professional and technical personnel of various types employed full time on local health department staffs were relatively small in number. Progress continues to be slow in the employment of additional specialized professional and technical workers to provide more extensive and specialized services. It will be noted from table 13 that the 281 full-time dentists reported were employed in 27 States. Dental hygienists totaled 377; although reported by units in 26 States, the State of New York accounted for almost half of these workers. The number of other specialized personnel reported such as health educators, nutritionists, medical and psychiatric social workers, psychologists, and physical therapists remained low and were concentrated in relatively few units. Their representation changed only slightly from the previous year.

Distribution of Personnel by Type of Local Health Organization

The distribution of the 38,949 full-time employees of official health agencies among the four types of health organizations is shown in table 14, by type of employee. City health departments reported 17,064 workers, or 44 percent of the total employees of official health agencies. Second to cities, were single county units which reported a personnel complement of

Table 14.---Full-Time Personnel of Different Classifications Employed by Official Health Agencies, Arranged by Type of Local Health Organization
December 31, 1956

Type of personnel	Total official health agency personnel	Number of personnel by type of organization			
		Single county	City health department	Local health district	State health district
All types	<u>38,949</u> ^{1/}	<u>15,052</u>	<u>17,064</u>	<u>3,786</u>	<u>3,047</u>
Public health physicians	1,431	695	471	186	79
Public health dentists	281	63	194	14	10
Dental hygienists	377	56	293	2	26
Public health nurses	<u>12,956</u> ^{1/}	5,240	4,529	1,529	1,658
Clinic nurses	633	304	283	36	10
Sanitation personnel:					
Engineers	367	137	99	24	107
Veterinarians	265	76	164	11	14
Professional sanitarians	4,674	2,023	1,775	627	249
Other	2,641	912	1,494	128	107
Laboratory personnel	1,290	372	854	47	17
Health educators	259	98	128	14	19
Nutritionists	102	14	55	1	32
Medical social workers	173	61	97	1	14
Psychiatric social workers	111	69	33	8	1
Psychologists	59	37	15	3	4
Analysts and statisticians	183	76	104	3	-
Public health investigators	329	119	155	18	37
X-ray technicians	313	132	156	13	12
Physical therapists	140	72	33	4	31
Administrative management	453	143	273	26	11
Fiscal and clerical	8,645	3,328	3,837	914	566
Maintenance, custodial, and service Others:	1,837	573	1,119	116	29
Medical aides and assistants	695	89	582	23	1
Technicians and therapists (other than identified above)	103	53	45	1	4
Practical nurses	48	23	25	-	-
All others	584	287	251	37	9

^{1/} Includes 401 public health nurses, employed by voluntary agencies, under contract to provide service to official health agencies.

15,052 employees, or approximately 39 percent of the total personnel employed by all types of health organizations. Thus, 83 percent of the full-time workers were concentrated in reporting health jurisdictions which include slightly more than 72 percent of the population in organized areas.

Employees of local health districts and State health districts represented a very small proportion of the overall personnel count; however, about two-thirds of all counties covered by health organizations were in these reporting jurisdictions.

For individual personnel categories, the proportion of workers employed by each type of organization varied widely. Single county organizations employed the highest percentage of the following professional and technical personnel: Public health physicians, nurses, engineers, professional sanitarians, physical therapists, psychiatric social workers, and psychologists. For all groups other than those mentioned above, city health departments had the largest proportion of workers. Professional and technical personnel who had a much higher representation in city health departments than in other types of health organizations included dental hygienists, analysts and statisticians, veterinarians, laboratory personnel, public health investigators, public health dentists, and health educators.

Generally, the personnel distribution data reflect that health organizations serving sizable communities employ a much wider range of specialized personnel than those serving sparsely populated areas.

With the exception of State health districts, all types of health units showed slight overall gain in personnel between 1955 and 1956, the increases amounting to 277 employees in single county units, 346 in city health departments, and 308 in local health districts. The loss of 365 workers in State health districts was reflected in almost all personnel categories.

Personnel-Population Ratios

Although some growth in the full-time staffs of local health departments is evidenced from year to year, the augmentation is not great enough, because of growth in population, to raise the ratios of public health workers to population of the areas served. The staffing situation, nationally, reflects a continuous downward trend in these ratios. The ratio of full-time public health workers employed by all four types of health organizations was 26.0 per 100,000 population in 1956 as compared to 31.3 in 1950. For that year, the public health physician-population ratio of reporting organizations was 1.5, whereas in 1956 it was 1.0. Comparable ratios for nurses and sanitation personnel were as follows: Nurses, 10.4 in 1950 against 8.7 in 1956; sanitation personnel, 6.5 in 1950 against 5.3 in 1956.

In city health departments, the personnel-population ratio was considerably higher than the national figure, the ratio amounting to 35.2 workers per 100,000 population. In each of the other three types of health jurisdictions, the ratio was lower than the national figure. (See table 15.)

Except for State health districts, the physician ratio was quite uniform among the four types of health organizations. County health units and local health districts each had a slightly higher ratio than the national ratio of 1.0 physician per 100,000 population; the physician ratio for city health departments was the same as that for the country as a whole. State health districts had a physician ratio of only 0.3 per 100,000 population.

Table 16, a companion to table 15, shows the number of organizations, by type, within selected personnel-population ratio intervals. From this table it is apparent that the rate for all types of workers for at least 60 percent of the reporting health units was less than the national average of 26.0 per 100,000 population. For all types of organizations combined, the ratio intervals of 15 to 20 and 20 to 25 workers per 100,000 persons had the highest representation of units, with 291 and 289 units, respectively, in each interval. There were 43 units which employed enough personnel to bring the proportion of workers to population served to 50 or more per 100,000; 22 of these units were single county units, 15 were city health departments, 4 were local health districts, and 2 were State health districts. To the other extreme, about one-fifth of the organizations employed less than 15 workers per 100,000 persons residing in the health jurisdiction. It is obvious that the number of full-time workers on the staffs of these local health departments is so small that services necessarily must be very limited in both scope and quantity. Fifty-eight percent of the State health districts were in the lower intervals.

The intervals of 15 to 20 and 20 to 25 included the highest proportion of the single county units, the respective percentages being 23.1 and 22.1. Approximately 37 percent of the reporting units of this type had a personnel-population ratio which equalled or exceeded the national average for this type of unit of 25.4 workers per 100,000 population.

The highest proportion of city health units in any interval was in the 25 to 30 group and the second highest was in the 20 to 25 interval. Thirty-five percent of the city units were concentrated in these groups. Almost 30 percent of the city health departments had personnel-population ratios exceeding 35 workers per 100,000; as stated previously, the national average for cities was 35.2. Local and State health districts were predominant in the lower personnel-population ratio intervals.

Personnel Ratios According to Population Size of Health Jurisdictions

Relation of health department staffs to the population of the community served reveals that the personnel ratio per 100,000 population was highest for jurisdictions with populations of 500,000 and over. (See table 17.)

Table 15.--Ratio of Official Health Agency Personnel to Population Covered by Reporting
Full-Time Health Organizations of Different Types
December 31, 1956

Type of personnel	All types	Number of workers per 100,000 population covered by designated types of organizations			
		Single county	City health department	Local health district	State health district
All types	26.0 ^{1/}	25.4	35.2	23.5	11.9
Public health physicians	1.0	1.2	1.0	1.1	0.3
Public health dentists	0.2	0.1	0.4	0.1	*
Dental hygienists	0.2 ^{1/}	0.1	0.6	*	0.1
Public health nurses	8.7 ^{1/}	8.8	9.3	9.5	6.5
Clinic nurses	0.4	0.5	0.6	0.2	*
Sanitation personnel:	5.3	5.3	7.3	4.9	1.9
Engineers	(0.2)	(0.2)	(0.2)	(0.1)	(0.4)
Veterinarians	(0.2)	(0.1)	(0.3)	(0.1)	(0.1)
Professional sanitarians	(3.1)	(3.4)	(3.7)	(3.9)	(1.0)
Other	(1.8)	(1.6)	(3.1)	(0.8)	(0.4)
Laboratory personnel	0.8	0.6	1.7	0.3	0.1
Health educators	0.2	0.2	0.3	0.1	0.1
Nutritionists	0.1	*	0.1	*	0.1
Medical social workers	0.1	0.1	0.2	*	0.1
Psychiatric social workers	0.1	0.1	0.1	0.1	*
Psychologists	*	0.1	*	*	*
Analysts and statisticians	0.1	0.1	0.2	*	-
Public health investigators	0.2	0.2	0.3	0.1	0.1
X-ray technicians	0.2	0.2	0.3	0.1	0.1
Physical therapists	0.1	0.1	0.1	*	0.1
Administrative management	0.3	0.2	0.6	0.2	*
Fiscal and clerical	5.8	5.6	7.9	5.7	2.2
Maintenance, custodial, and service	1.2	1.0	2.3	0.7	0.1
Others:					
Medical aides and assistants	0.4	0.2	1.2	0.1	*
Technicians and therapists	0.1	0.1	0.1	*	*
(other than identified above)					
Practical nurses	*	*	0.1	-	-
All others	0.4	0.5	0.5	0.2	*

^{1/} Includes 382 public health nurses, employed by voluntary agencies, under contract to provide service to official health agencies.

* Less than 0.05. In each column where more than one asterisk (*) is shown, these items total to 0.1.

Table 16.--Distribution of Full-Time Health Organizations of Different Types, According to Ratio of Full-Time Official Health Agency Personnel per 100,000 Population in the Jurisdiction Served
December 31, 1956

Personnel rate per 100,000 persons	Total organizations		Single county		City health department		Local health district		State health district	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Totals	<u>1,425</u>	<u>100.0</u>	<u>787</u>	<u>100.0</u>	<u>265</u>	<u>100.0</u>	<u>272</u>	<u>100.0</u>	<u>101</u>	<u>100.0</u>
Under 5	17	1.2	-	-	1	0.4	2	0.7	14	13.8
5 - 10	58	4.1	20	2.5	11	4.1	9	3.3	18	17.8
10 - 15	204	14.3	120	15.3	24	9.1	33	12.1	27	26.7
15 - 20	291	20.4	182	23.1	26	9.8	62	22.8	21	20.8
20 - 25	289	20.3	174	22.1	38	14.3	66	24.3	11	10.9
25 - 30	220	15.4	118	15.0	55	20.7	45	16.5	2	2.0
30 - 35	132	9.3	73	9.3	32	12.1	23	8.5	4	4.0
35 - 40	89	6.2	45	5.7	28	10.6	14	5.2	2	2.0
40 - 45	50	3.5	23	2.9	18	6.8	9	3.3	-	-
45 - 50	32	2.3	10	1.3	17	6.4	5	1.8	-	-
50 and over	43	3.0	22	2.8	15	5.7	4	1.5	2	2.0

Table 17.--Number of Personnel Employed Full Time by Official Health Agencies and Ratio of Personnel per 100,000 Population Covered by Full-Time Health Organizations of Different Types, According to Population of the Jurisdiction Served
December 31, 1956

Population interval	All types of organizations		Single county		City health department		Local health district		State health district	
	Number of personnel	Ratio	Number of personnel	Ratio	Number of personnel	Ratio	Number of personnel	Ratio	Number of personnel	Ratio
Totals	38,949	26.0	15,052	25.4	17,064	35.2	3,786	23.5	3,047	11.9
Under 35,000	2,566	24.1	1,673	22.8	411	26.0	459	27.7	23	65.9
35,000 - 50,000	2,283	22.9	1,060	20.5	513	27.7	646	23.2	64	37.3
50,000 - 100,000	5,638	23.0	2,553	22.3	1,314	28.2	1,583	20.8	188	23.3
100,000 - 250,000	7,544	23.8	3,363	24.3	2,124	33.8	1,023	26.9	1,034	13.4
250,000 - 500,000	5,521	22.1	2,457	26.8	1,843	37.7	75	29.1	1,146	10.8
500,000 and over	15,397	32.2	3,946	31.8	10,859	37.1	-	-	592	9.5

The rate for health departments in this group was 32.2 workers per 100,000 persons as compared to the national average of 26.0. Health organizations serving communities of 500,000 population and over comprised only 3 percent of all reporting jurisdictions. However, the personnel employed by these health departments represented nearly 40 percent of the total personnel of official health agencies.

City health departments serving areas with populations totaling at least 250,000 had the highest ratios of the city units. In cities within the population intervals of 250,000 to 500,000 and 500,000 and over, the rates were 37.7 and 37.1, respectively. The highest personnel-population ratio for single county units likewise was in units with a population coverage of 500,000 or more. The ratio for these counties was 31.8 employees per 100,000. Contrary to city health departments and single county units, the highest personnel-population ratios for State health districts were in jurisdictions with populations of less than 35,000. However, the greatest portion of State health district employees were reported in jurisdictions with 100,000 to 250,000 and 250,000 to 500,000 residents; the respective ratios for jurisdictions within these population intervals were 13.4 and 10.8, respectively.

Table 18 shows the number of reporting organizations of all types according to population size, within various personnel-population ratio ranges. Of 859 organizations with a personnel ratio of under 25 employees per 100,000 (the average for the Nation was 26), 78.5 percent served areas with a population of less than 100,000. Of 556 organizations with a personnel ratio exceeding 25 employees per 100,000, 76 percent served areas with a population of more than 100,000.

Personnel Ratios According to Per Capita Income of Health Jurisdictions

When the personnel rates were related to the per capita income of the area served, the rate of workers employed per 100,000 population was higher when the average per capita income was \$1,500 or above. (See table 19.) The highest personnel-population ratio for all types of units, was in the per capita income interval of \$2,500 and over, the rate being 33.4. Slightly less than two percent of the official health agency employees were engaged in public health work in areas within this interval. In single county units, the highest rate of 41.8 was in this same grouping. City health departments had the highest personnel-population ratio in areas with per capita incomes of between \$500 and \$1,000. Only 26 public health workers were employed in such areas. Likewise, in State health districts the personnel-population ratio in the \$500 to \$1,000 income interval exceeded that of all other intervals, amounting to 21.9 workers per 100,000 population. The major portion of the State health district personnel was employed in areas with a per capita income of \$1,000 to \$1,500, for which the rate was only 10.3.

Table 18.--Number of Full-Time Health Organizations within Specified Population Sizes, Grouped According to Ratio of Full-Time Official Health Agency Personnel per 100,000 Population in the Jurisdiction Served
December 31, 1956

Personnel rate per 100,000 persons	Total organizations	Number of organizations in each population interval					
		Under 35,000	35,000- 50,000	50,000- 100,000	100,000- 250,000	250,000- 500,000	500,000 and over
Totals	<u>1,425</u>	<u>513</u>	<u>234</u>	<u>356</u>	<u>207</u>	<u>72</u>	<u>43</u>
Under 5	17	3	-	1	6	5	2
5 - 10	58	10	15	10	10	9	4
10 - 15	204	59	35	64	32	12	2
15 - 20	291	102	48	84	42	9	6
20 - 25	289	122	45	76	36	8	2
25 - 30	220	75	52	48	29	11	5
30 - 35	132	57	17	27	18	6	7
35 - 40	89	30	11	23	15	6	4
40 - 45	50	21	4	12	9	1	3
45 - 50	32	14	3	5	4	2	4
50 and over	43	20	4	6	6	3	4

Table 19.--Number of Personnel of All Categories Employed Full Time by Official Health Agencies and Ratio of Personnel per 100,000 Population Covered by Reporting Full-Time Local Health Organizations of Different Types, According to Per Capita Income of the Jurisdiction Served
December 31, 1956

Per capita income interval	All types of organizations		Single county		City health department		Local health district		State health district	
	Number of personnel	Ratio	Number of personnel	Ratio	Number of personnel	Ratio	Number of personnel	Ratio	Number of personnel	Ratio
Totals	<u>38,949</u>	<u>26.0</u>	<u>15,052</u>	<u>25.4</u>	<u>17,064</u>	<u>35.2</u>	<u>3,786</u>	<u>23.5</u>	<u>3,047</u>	<u>11.9</u>
No data	807	15.6	-	-	81	26.9	83	16.3	643	14.8
Under \$ 500	-	-	-	-	-	-	-	-	-	-
\$ 500 - \$1,000	4,127	22.0	1,932	20.5	26	58.0	1,906	23.4	263	21.9
\$1,000 - \$1,500	7,925	19.7	4,529	24.1	468	38.1	1,453	24.3	1,475	10.3
\$1,500 - \$2,000	18,654	31.2	6,389	27.1	11,324	38.7	293	21.8	648	11.7
\$2,000 - \$2,500	6,860	28.8	1,967	28.0	4,824	29.3	51	30.1	18	11.4
\$2,500 and over	576	33.4	235	41.8	341	29.4	-	-	-	-

There was a preponderance of units--67 percent--within the per capita income intervals of \$500 to \$1,000 and \$1,000 to \$1,500. Of the 516 units in the \$500 to \$1,000 interval and the 433 units in the \$1,000 to \$1,500 interval, slightly more than one-third had a personnel-population ratio exceeding 25 workers per 100,000 persons. Of the 307 units within the per capita income interval of \$1,500 to \$2,000, 51 percent had personnel-population ratios varying from 25 workers to 50 workers and over per 100,000 population. To the highest extreme, personnel-population ratios of 50 and over prevailed in 43 units. (See table 20.)

Personnel Ratios According to Per Capita Expenditure of Health Organizations

The relationship of personnel employed to funds expended, on a per capita basis, in local health organizations of all types usually reflects increased personnel rates as the expenditure rates increase. (See table 21.) In units spending less than 50 cents per capita for local health services, the personnel-population ratio was 12.1 per 100,000 population, whereas in units spending \$3.00 and over per capita the ratio was 50.0 per 100,000 population. Approximately 46 percent of the total full-time workers were employed in areas spending \$1.50 per person and over; the personnel-population ratios in these jurisdictions exceeded 30 workers per 100,000 population. Less than five percent of the total employees were employed in units in the highest expenditure interval; the majority of these employees were reported by city health departments.

Within the four individual types of organizations, the national pattern of personnel rates according to funds expended for health services was somewhat distorted by isolated units which were in the extreme. In some units, a low per capita expenditure was reflected but the personnel rate was high, and in others, the reverse situation was observed.

Table 22 shows the number of organizations within each per capita expenditure interval grouped according to personnel rates. In the 106 health units spending less than \$0.50 per person, approximately 90 percent had personnel-population ratios of less than 25 workers per 100,000 persons. In the 511 units spending between \$0.50 and \$1.00, a like percentage had personnel-population ratios under 25 workers per 100,000 persons. The situation was reverse in units spending over \$1.00 per capita. For example, 58 percent of the 410 units spending between \$1.00 and \$1.50 and 86 percent of the 161 units in the \$1.50 to \$2.00 interval employed personnel at a rate exceeding 25 workers per 100,000 population. Likewise, in the higher expenditure intervals, a greater proportion of the units were in the higher personnel ratio groupings.

Professional and Technical Personnel Ratios

Exclusive of the 8,645 clerical workers, the 1,837 maintenance, custodial, and service personnel, and the 584 employees included under "all others," 27,883 of the employees were grouped as professional and technical

Table 20.--Number of Full-Time Health Organizations within Specified Per Capita Income Intervals,
Grouped According to Ratio of Full-Time Official Health Agency Personnel per 100,000
Population of the Jurisdiction Served
December 31, 1956

Personnel rate per 100,000 persons	Total organizations	Number of organizations in each per capita income interval						
		No data	Less than \$500	\$ 500- 1,000	\$1,000- 1,500	\$1,500- 2,000	\$2,000- 2,500	\$2,500 & over
Totals	<u>1,425</u>	<u>57</u>	<u>0</u>	<u>516</u>	<u>433</u>	<u>307</u>	<u>85</u>	<u>27</u>
Under 5	17	2	-	2	12	1	-	-
5 - 10	58	6	-	15	17	15	3	2
10 - 15	204	17	-	82	62	30	10	3
15 - 20	291	7	-	113	101	57	9	4
20 - 25	289	10	-	114	96	48	18	3
25 - 30	220	7	-	69	66	62	13	3
30 - 35	132	1	-	60	30	20	17	4
35 - 40	89	3	-	29	23	25	8	1
40 - 45	50	1	-	15	11	21	1	1
45 - 50	32	2	-	5	6	13	2	4
50 and over	43	1	-	12	9	15	4	2

Table 21.--Number of Personnel of All Categories Employed Full Time by Official Health Agencies and Ratio of Personnel per 100,000 Population Covered by Reporting Full-Time Local Health Organizations of Different Types, According to Per Capita Expenditure of the Jurisdiction Served December 31, 1956

Per capita expenditure interval	All types of organizations		Single county		City health department		Local health district		State health district	
	Number of personnel	Ratio	Number of personnel	Ratio	Number of personnel	Ratio	Number of personnel	Ratio	Number of personnel	Ratio
Totals	38,949	26.0	15,052	25.4	17,064	35.2	3,786	23.5	3,047	11.9
No data	4,427	30.0	204	26.8	2,504	50.1	813	30.8	906	14.2
Under \$0.50	1,954	12.1	252	11.2	433	38.4	217	14.5	1,052	9.3
\$0.50 - \$1.00	5,529	16.5	3,685	17.7	83	8.9	937	17.4	824	12.9
\$1.00 - \$1.50	9,196	24.7	5,058	26.1	2,694	23.1	1,235	25.2	209	15.1
\$1.50 - \$2.00	8,072	30.9	4,014	33.1	3,539	28.5	463	32.8	56	37.4
\$2.00 - \$2.50	6,723	43.1	771	41.6	5,857	43.4	95	39.2	-	-
\$2.50 - \$3.00	1,376	49.8	748	48.8	617	51.0	11	51.6	-	-
\$3.00 and over	1,672	50.0	320	48.7	1,337	50.0	15	94.3	-	-

Table 22.--Number of Full-Time Health Organizations within Specified Per Capita Expenditure Intervals,
Grouped According to Ratio of Full-Time Official Health Agency Personnel per 100,000
in the Jurisdiction Served
December 31, 1956

Personnel rate per 100,000 persons	Total organizations	Number of organizations in each per capita expenditure interval							
		No data	Under \$0.50	\$0.50- 1.00	\$1.00- 1.50	\$1.50- 2.00	\$2.00- 2.50	\$2.50- 3.00	\$3.00 & over
Totals	<u>1,425</u>	<u>172</u>	<u>106</u>	<u>511</u>	<u>419</u>	<u>161</u>	<u>41</u>	<u>10</u>	<u>14</u>
Under 5	17	5	10	2	-	-	-	-	-
5 - 10	58	16	26	16	-	-	-	-	-
10 - 15	204	29	44	125	6	-	-	-	-
15 - 20	291	27	11	198	50	5	-	-	-
20 - 25	289	28	4	121	118	18	-	-	-
25 - 30	220	25	2	38	117	38	-	-	-
30 - 35	132	14	1	6	78	28	4	-	1
35 - 40	89	13	1	1	32	28	12	-	2
40 - 45	50	6	2	3	6	20	10	1	2
45 - 50	32	3	3		2	13	8	2	1
50 and over	43	6	2	1	1	11	7	7	8

personnel. When the personnel-population ratios for the professional and technical staff were compared to those for the entire staff, they were found to be considerably lower but quite comparable with respect to distribution among the different types of organizations and in relation to population size, per capita income, and per capita expenditure of organized areas. City health departments which employed 43 percent of the total professional and technical workers had the highest ratio--24.4 employees per 100,000 population. The ratio for single county units almost equalled the national average of 18.6, but the personnel rate for State health districts was far below this average.

<u>Type of organization</u>	<u>Professional and technical personnel</u>	
	<u>Number</u>	<u>Rate per 100,000</u>
Total	27,883	18.6
Single county	10,864	18.3
City health department	11,857	24.4
Local health district	2,719	16.9
State health district	2,443	9.6

Tables 23, 24, and 25 show for public health physicians, nurses, and sanitarians, separately, and for other professional and technical workers combined, a distribution of reporting organizations according to the personnel-population ratios in jurisdictions of various population size, per capita income, and per capita expenditure intervals.

There were 469 units without a full-time physician reported, and 225 had less than one physician per 100,000 population. Units serving areas of less than 35,000 population had the highest physician rates. Forty-one percent of the 747 jurisdictions with less than 50,000 persons averaged 2 or more physicians for every 100,000 persons. For organizations serving more populous areas, the physician rate usually was below 2 per 100,000. The use of part-time physicians by health departments serving communities in the higher population intervals is reflected by the relatively low full-time physician rate for jurisdictions exceeding 100,000 population; 97 percent of the units with populations of 100,000 and over had less than 2 physicians for each 100,000 persons residing in the jurisdiction.

The extreme shortage of nurses is evidenced throughout local health jurisdictions. There were only 52 units which had enough nurses to meet the nurse ratio of 1 public health nurse for every 5,000 persons, which is generally considered as a minimum. The population of 24 of these jurisdictions was less than 35,000 per unit. There were 39 units which had no nursing personnel on duty as of December 31, 1956, and 11 had a ratio of

Table 23.--Distribution of Full-Time Health Organizations According to Population Size and Ratio of Professional and Technical Personnel of Different Types per 100,000 Population in the Jurisdiction Served

Personnel rate per 100,000 persons	Total organizations	Number of organizations in each population interval					
		Under 35,000	35,000- 50,000	50,000- 100,000	100,000- 250,000	250,000- 500,000	500,000 and over
PHYSICIANS							
Totals	1,425	513	234	356	207	72	43
None	469	250	81	94	27	14	3
Under 1	225	16	11	16	115	40	27
1 - 2	387	55	23	223	62	15	9
2 - 3	190	49	117	17	3	2	2
3 - 4	88	82	-	3	-	1	2
4 - 5	31	28	2	1	-	-	-
5 and over	35	33	-	2	-	-	-
NURSES							
Totals	1,425	513	234	356	207	72	43
None	39	30	4	3	1	1	-
Under 1	11	-	-	-	6	4	1
1 - 5	204	57	39	60	36	6	6
5 - 7	261	90	45	67	40	10	9
7 - 10	375	130	60	101	50	28	6
10 - 15	360	132	63	87	45	17	16
15 - 20	123	50	16	28	22	2	5
20 and over	52	24	7	10	7	4	-
SANITATION PERSONNEL							
Totals	1,425	513	234	356	207	72	43
None	87	75	6	3	2	1	-
Under 1	15	-	-	-	4	9	2
1 - 5	674	199	127	199	104	31	14
5 - 7	329	119	53	93	49	10	5
7 - 10	221	80	40	38	35	14	14
10 - 15	82	31	7	20	9	7	8
15 - 20	13	6	1	2	4	-	-
20 and over	4	3	-	1	-	-	-
OTHER PROFESSIONAL AND TECHNICAL WORKERS							
Totals	1,425	513	234	356	207	72	43
None	752	388	143	165	46	10	-
Under 1	61	3	4	3	33	10	8
1 - 5	438	64	61	154	95	43	21
5 - 7	90	18	17	20	20	4	11
7 - 10	47	25	4	6	8	3	1
10 - 15	27	9	5	6	4	2	1
15 - 20	6	5	-	-	1	-	-
20 and over	4	1	-	2	-	-	1

Table 24.--Distribution of Full-Time Health Organizations According to Per Capita Income Interval and Ratio of Professional and Technical Personnel of Different Types per 100,000 Population in the Jurisdiction Served

Personnel rate per 100,000 persons	Total organi- zations	Number of organizations in each per capita income interval						
		No data	Under \$500	\$ 500- 1,000	\$1,000- 1,500	\$1,500 2,000	\$2,000 2,500	\$2,500 & over
PHYSICIANS								
Totals	1,425	57	0	516	433	307	85	27
None	469	36	-	185	104	93	35	16
Under 1	225	9	-	39	63	90	24	-
1 - 2	387	7	-	119	155	78	21	7
2 - 3	190	3	-	86	70	28	2	1
3 - 4	88	-	-	51	24	9	2	2
4 - 5	31	1	-	17	8	4	1	-
5 and over	35	1	-	19	9	5	-	1
NURSES								
Totals	1,425	57	0	516	433	307	85	27
None	39	14	-	12	3	5	3	2
Under 1	11	-	-	-	9	2	-	-
1 - 5	204	4	-	75	62	47	10	6
5 - 7	261	6	-	105	82	50	14	4
7 - 10	375	17	-	137	125	72	20	4
10 - 15	360	6	-	144	107	75	23	5
15 - 20	123	6	-	33	32	36	11	5
20 and over	52	4	-	10	13	20	4	1
SANITATION PERSONNEL								
Totals	1,425	57	0	516	433	307	85	27
None	87	13	-	49	9	11	2	3
Under 1	15	1	-	-	12	2	-	-
1 - 5	674	21	-	264	233	113	33	10
5 - 7	329	8	-	107	111	72	24	7
7 - 10	221	6	-	73	54	65	22	1
10 - 15	82	4	-	21	13	35	3	6
15 - 20	13	3	-	1	1	7	1	-
20 and over	4	1	-	1	-	2	-	-
OTHER PROFESSIONAL AND TECHNICAL WORKERS								
Totals	1,425	57	0	516	433	307	85	27
None	752	20	-	424	218	69	13	8
Under 1	61	1	-	5	33	21	1	-
1 - 5	438	20	-	68	146	148	44	12
5 - 7	90	7	-	9	25	33	14	2
7 - 10	47	6	-	7	7	16	8	3
10 - 15	27	1	-	3	2	17	2	2
15 - 20	6	1	-	-	1	2	2	-
20 and over	4	1	-	-	1	1	1	-

Table 25.--Distribution of Full-Time Health Organizations According to Per Capita Expenditure and Ratio of Professional and Technical Personnel of Different Types per 100,000 Population in the Jurisdiction Served

Personnel rate per 100,000 persons	Total organi- zations	Number of organizations in each per capita expenditure interval							
		No data	Under \$0.50	\$0.50- 1.00	\$1.00- 1.50	\$1.50- 2.00	\$2.00- 2.50	\$2.50- 3.00	\$3.00 & over
PHYSICIANS									
Totals	1,425	172	106	511	410	161	41	10	14
None	469	78	58	172	103	45	9	2	2
Under 1	225	23	23	84	61	26	6	-	2
1 - 2	387	41	17	158	106	42	16	4	3
2 - 3	190	17	5	63	80	15	6	1	3
3 - 4	88	3	2	23	41	12	2	2	3
4 - 5	31	5	-	8	8	8	1	1	-
5 and over	35	5	1	3	11	13	1	-	1
NURSES									
Totals	1,425	172	106	511	410	161	41	10	14
None	39	10	3	18	5	3	-	-	-
Under 1	11	4	5	1	1	-	-	-	-
1 - 5	204	26	57	100	18	3	-	-	-
5 - 7	261	24	19	153	51	13	1	-	-
7 - 10	375	37	8	168	132	28	-	-	2
10 - 15	360	40	8	66	162	63	16	1	4
15 - 20	123	23	3	2	36	38	13	6	2
20 and over	52	8	3	3	5	13	11	3	6
SANITATION PERSONNEL									
Totals	1,425	172	106	511	410	161	41	10	14
None	87	10	6	40	21	8	-	1	1
Under 1	15	6	8	1	-	-	-	-	-
1 - 5	674	71	82	323	155	37	5	1	-
5 - 7	329	40	3	103	129	40	9	1	4
7 - 10	221	27	3	39	78	55	12	4	3
10 - 15	82	11	3	5	25	17	14	2	5
15 - 20	13	5	-	-	2	3	1	1	1
20 and over	4	2	1	-	-	1	-	-	-
OTHER PROFESSIONAL AND TECHNICAL WORKERS									
Totals	1,425	172	106	511	410	161	41	10	14
None	752	72	63	354	201	53	7	2	-
Under 1	61	9	13	25	10	4	-	-	-
1 - 5	438	56	20	122	159	58	19	1	3
5 - 7	90	17	5	6	26	23	6	3	4
7 - 10	47	8	3	3	10	15	4	3	1
10 - 15	27	8	2	1	4	5	3	1	3
15 - 20	6	1	-	-	-	2	1	-	2
20 and over	4	1	-	-	-	1	1	-	1

less than 1 nurse per 100,000 population. The nurse ratio for approximately half the organizations ranged between 7 and 15 nurses per 100,000 persons. Regardless of the population size of the community served, the interval rates of 7 to 10 and 10 to 15 nurses per 100,000 had the highest percentage of units.

More than half of the reporting organizations employed sanitation workers at a rate which was less than the national average of 5.3 per 100,000 population; this pattern prevailed in all population intervals. Included in this group of workers were engineers, professionally trained sanitarians, veterinarians, and nongraduate personnel engaged in general sanitation activities. Less than one-fourth of the organizations had enough sanitation workers to compare favorably with the generally accepted minimum of one sanitarian for every 15,000 persons in the jurisdiction.

Relatively few departments employed various professional and technical competencies--excluding physicians, nurses, and sanitation workers--at a rate exceeding 1 such employee for every 20,000 persons.

There was no distinctive pattern manifested in the correlation of per capita income of the area and the rate of employment of professional and technical personnel on the staffs of local health units. A breakdown of organizations, according to per capita income of the jurisdiction and the rate at which professional and technical workers were employed per 100,000 persons served, reflects that health departments serving jurisdictions in the higher per capita income intervals had somewhat higher personnel-population ratios than those in the lower intervals.

When the reporting organizations were distributed according to the per capita expenditure of the unit in relation to the ratio of professional and technical personnel on the staff, a higher proportion of the units spending in excess of \$1.00 per person generally employed physicians, nurses, sanitation workers, and other professional and technical personnel at a higher personnel ratio than units spending less than \$1.00.

Personnel Employed by Official Agencies Other Than Health Agencies

Public health personnel employed full time by other official agencies performing local public health services totaled 10,133 as of December 31, 1956. These employees represented one-fifth of the full-time public health personnel employed by all tax-supported agencies and were reported by local health units in 44 States and the District of Columbia. (See table 26.) For the most part, official agencies other than health agencies employing public health personnel include boards of education, welfare departments, the Department of Agriculture, the Bureau of Indian Affairs, and governmental hospital commissions or boards (exclusive of Army, Navy, Veterans Administration, and Public Health Service Hospitals).

A high proportion of these workers--40 percent--were serving in local areas of California and New York. Other States in which relatively large numbers of public health personnel were employed by official agencies other than health agencies included Pennsylvania, New Jersey, Illinois, Texas, and Minnesota.

The proportion of workers of various types employed by official agencies other than health varied considerably from that shown for official health agency staffs. Participation of other official agencies in school health programs is indicated particularly in the high proportion of public health nurses and dental hygienists employed. Nurses comprised 65 percent of all public health employees of other governmental agencies. These nurses for the most part are employed by boards of education in the school health program.

The total number of dental hygienists, psychologists, and psychiatric social workers reported as "other official agency" personnel was larger in each instance than the number reported as official health agency employees.

Table 26.--Number of Full-Time Public Health Workers of Different Classifications Employed by Other Official Agencies Rendering Some Type of Health Service in Local Areas with Full-Time Health Organization
December 31, 1956

State	Total	Public Health Physicians	Public Health Nurses	Clinic Nurses	Public Health Dentists	Dental Hygienists	Engineers	Professional Sanitarians	Other Sanitation Personnel	Veterinarian Personnel	Laboratory Personnel	Health Educators	Nutritionists	Medical Social Workers	Psychiatric Social Workers	Psychologists	Analysts and Statisticians	Public Health Investigators	X-ray Technicians	Physical Therapists	Administrative Management Personnel	Clerks	Maintenance and Service Personnel	All Others
Totals	10,133	246	6,650	84	82	534	47	62	120	21	384	59	74	46	157	296	9	24	82	78	40	549	123	366
Alabama	15	2	1	1	1	1	-	-	-	-	1	-	-	-	-	-	-	1	2	2	1	-	3	1
Arizona	157	5	106	3	2	3	1	5	-	-	2	2	-	-	2	2	-	1	2	2	2	10	3	5
Arkansas	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
California	1,479	79	945	8	13	24	22	16	3	2	21	7	2	2	56	42	-	-	5	12	2	112	41	65
Colorado	26	-	-	3	1	-	-	-	-	-	-	-	-	-	-	1	-	-	1	2	1	3	1	-
Connecticut	161	4	68	8	1	24	-	-	-	-	-	-	-	2	3	10	-	-	2	-	7	6	5	21
Delaware	51	-	51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dist. of Columbia	39	-	39	-	-	-	-	-	-	-	12	-	-	1	7	11	-	1	-	-	-	13	-	10
Florida	70	-	11	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Georgia	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	15	-	15	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Illinois	677	30	325	7	5	2	-	6	91	1	4	3	1	3	11	6	2	-	35	1	2	106	11	25
Indiana	141	5	95	-	2	3	-	-	-	-	2	-	-	2	2	3	-	-	-	-	1	6	-	23
Iowa	99	1	44	9	2	3	-	-	-	-	2	3	5	-	2	5	1	1	2	2	2	8	5	-
Kansas	90	-	86	-	-	-	-	-	-	-	-	3	-	-	1	-	-	-	-	-	1	1	-	-
Kentucky	16	5	3	-	1	-	1	1	-	1	-	-	-	-	2	-	-	-	-	-	-	-	-	-
Louisiana	13	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	9	-	-
Maine	25	-	23	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Maryland	61	1	38	-	3	1	-	-	-	4	3	1	-	1	-	-	-	-	-	-	1	3	-	4
Massachusetts	306	4	364	2	3	4	1	-	1	1	3	2	-	-	1	1	-	-	2	1	2	4	-	11
Michigan	106	2	72	1	4	5	3	6	3	1	3	1	-	-	2	2	-	-	3	5	-	-	-	-
Minnesota	454	5	328	2	15	13	1	-	2	1	1	1	2	8	2	2	2	-	15	8	-	39	-	1
Mississippi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	3	-	-	-	-	-	2	-	-
Missouri	255	8	227	-	1	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Montana	5	1	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	1	-	-
Nebraska	57	1	41	-	-	-	1	-	1	-	-	-	-	2	1	2	-	-	-	2	-	2	-	4
Nevada	12	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	-	-	-	10	-	4	7	4	2	1	20	8	4	2	5	13	3	-	6	-	3	25	2	-
New Mexico	82	-	73	-	1	-	-	7	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
New York	2,554	32	1,327	2	7	388	3	1	3	4	310	15	45	4	19	134	-	15	2	4	5	69	42	123
North Carolina	13	1	1	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	1	-	-	3	-	4
North Dakota	2	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ohio	245	2	191	7	6	5	-	-	-	-	-	1	-	3	3	4	-	1	3	4	2	16	-	-
Oklahoma	60	1	49	1	-	-	-	1	-	1	-	-	-	-	-	2	-	-	-	-	-	-	-	-
Oregon	23	1	19	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania	886	28	658	8	7	37	4	1	7	4	3	5	1	5	3	23	-	1	2	10	8	57	2	12
Rhode Island	75	-	73	-	-	-	-	1	-	-	-	-	-	2	5	1	-	-	-	-	-	1	-	-
South Carolina	46	-	21	-	-	-	2	1	1	-	-	-	1	2	-	-	-	-	-	-	3	11	-	-
South Dakota	3	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee	19	3	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Texas	515	10	398	11	1	3	1	3	-	-	1	3	9	1	3	4	1	-	-	-	2	14	8	33
Utah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	101	3	86	-	4	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Washington	134	2	96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
West Virginia	48	2	28	-	3	7	-	-	-	-	-	-	2	-	12	10	-	-	-	-	-	5	1	8
Wisconsin	104	3	37	-	-	5	-	-	2	-	-	-	-	1	14	14	-	-	-	-	-	10	1	1
Wyoming	3	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* Vermont has no full-time health organizations rendering local health service.

S U M M A R Y

A total of 1,425 health organizations providing full-time local health services submitted the Report of Public Health Personnel as of December 31, 1956. These organizations included 2,208 counties and 265 cities. The combined population residing in organized areas covered by the reports totaled almost 150 million, or 89 percent of the estimated population of the country. This coverage closely paralleled that reported in 1955.

A breakdown of local health units on an organizational basis shows that 55 percent of all reporting units were of the single county type; about 19 percent were city health departments and local health districts, each; and approximately 7 percent were State health districts. Although the number of State health districts was relatively small, they included about one-third of the organized counties.

Generally, reports reflected need for the development of local health units to serve more populous areas. Despite the fact there has been some consolidation of governmental units and merging of resources, as well as sharing of personnel, more than one-third of all reporting organizations included populations totaling less than 35,000. About 47 percent of the single county units, 29 percent of the city health departments, and 24 percent of the local health districts served areas in which the population was under 35,000. The greater portion of the jurisdictions and counties included had a population density ranging between 18 and 90 persons per square mile. To the extreme, 8 percent of the organized areas had a density ratio of less than 18 persons per square mile.

A total of \$173 million was reported expended during the fiscal year 1956 in local health units submitting the Report of Public Health Personnel. Of this amount, 72 percent of the total outlay was derived from local sources, 22 percent from State-appropriated funds, and 6 percent from Federal funds. Reported data show that, of the four types of health organizations, city health departments depend the least on Federal funds for support of their health department operations and State health districts the most.

The expenditure data nationally reflect insufficient funds expended on a per capita basis to meet today's public health needs, particularly in areas with a low economic level. Although some increase in the expenditures for local health services has occurred during the past few years, the amount spent by most health departments remains too low to offset the increased costs of providing health services. Of the organizations for which expenditures were reported, 49 percent had an annual expenditure during fiscal year 1956 of under \$1.00 per person. Only 18 percent of the local organizations spent more than \$1.50 per capita. The average expenditure for all units for which data were available was \$1.28 per person.

An analysis of the relationship between the average income of a community and its expenditure for public health purposes reveals that as the income level of health jurisdictions increases the proportion of units spending in excess of \$1.00 per person also increases. However, there were a few jurisdictions in which the average income exceeded \$2,000 but the funds expended per person for public health services averaged less than \$1.00.

There were 38,949 full-time public health workers on the staffs of local health units. The downward trend of personnel-population ratio continues with evidence of serious nationwide shortages in public health physicians, nurses, sanitarians, and other professional and technical personnel. The ratio of full-time public health workers employed by all types of health organizations was 26.0 per 100,000 population in 1956 as compared to 31.3 in 1950. Physician and nursing personnel ratios were extremely low in a high percentage of the units.

City health departments usually employ a higher proportion of workers in relation to population than other types of organizations. Although relatively few in number, the health organizations serving communities of 500,000 population and over employed approximately 40 percent of the official health agency workers. The staffs of about one-fifth of all the reporting organizations averaged less than 15 workers per 100,000 persons residing in the health jurisdiction; an additional 41 percent had between 15 and 25 workers per 100,000 persons. Thus, in approximately 60 percent of the reporting units, the personnel rate was less than 25 workers for each 100,000 population in the health jurisdiction. Obviously, the extent of public health protection which can be provided an increasing population is limited in a large proportion of the units by the absence of a team of workers adequate in number to meet the extensive demands of a modern public health program.

Health jurisdictions with a per capita income of between \$1,000 and \$2,000 usually had a higher personnel rate than those in which the income per person was lower. Forty-eight percent of the official health agency workers were reported in areas in which the income per person averaged between \$1,500 and \$2,000. With some exceptions, the personnel rate likewise increased as the level of expenditure became higher. However, the national expenditure pattern reflects that the level of expenditure is too low for the operation of a well-rounded public health program which will meet the needs of the average community.

A P P E N D I X

Comparison of Coverage of the Country by Full-Time Local Health Organizations for Selected Years^{1/}

Year	Organized Areas				Unorganized Areas	
	Number of organizations	Number of counties included	Population covered	Percent of total population covered	Population represented	Percent of total population in unorganized areas
1957	1,435	2,274	155,857,900	92.4	12,792,100	7.6
1956	1,446	2,209	147,147,400	88.7	18,672,100	11.3
1955	1,442	2,204	144,604,600	88.9	18,004,900	11.1
1954	1,434	2,218	141,682,700	88.7	17,995,800	11.3
1953	1,365	2,197	137,874,000	88.4	18,056,100	11.6
1952	1,383	2,184	136,536,800	88.4	17,882,600	11.6
1951	1,353	2,105	129,600,000	86.0	21,064,000	14.0
1950	1,348	2,088	129,073,100	86.1	20,782,400	13.9
1947	1,284	1,874	113,501,800	81.5	25,715,500	18.5
1935	886	762	74,133,300	56.3	57,535,900	43.7

^{1/} Coverage data for 1947 and subsequent years compiled from annual Directory of Full-Time Local Health Officers (Units); data for 1935 - Kratz, F. W., Status of Full-Time Local Health Organization at the End of the Fiscal Year 1941-1942. Pub. Health Rep., 58:345-351 (1943). Reprint No. 2454.



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